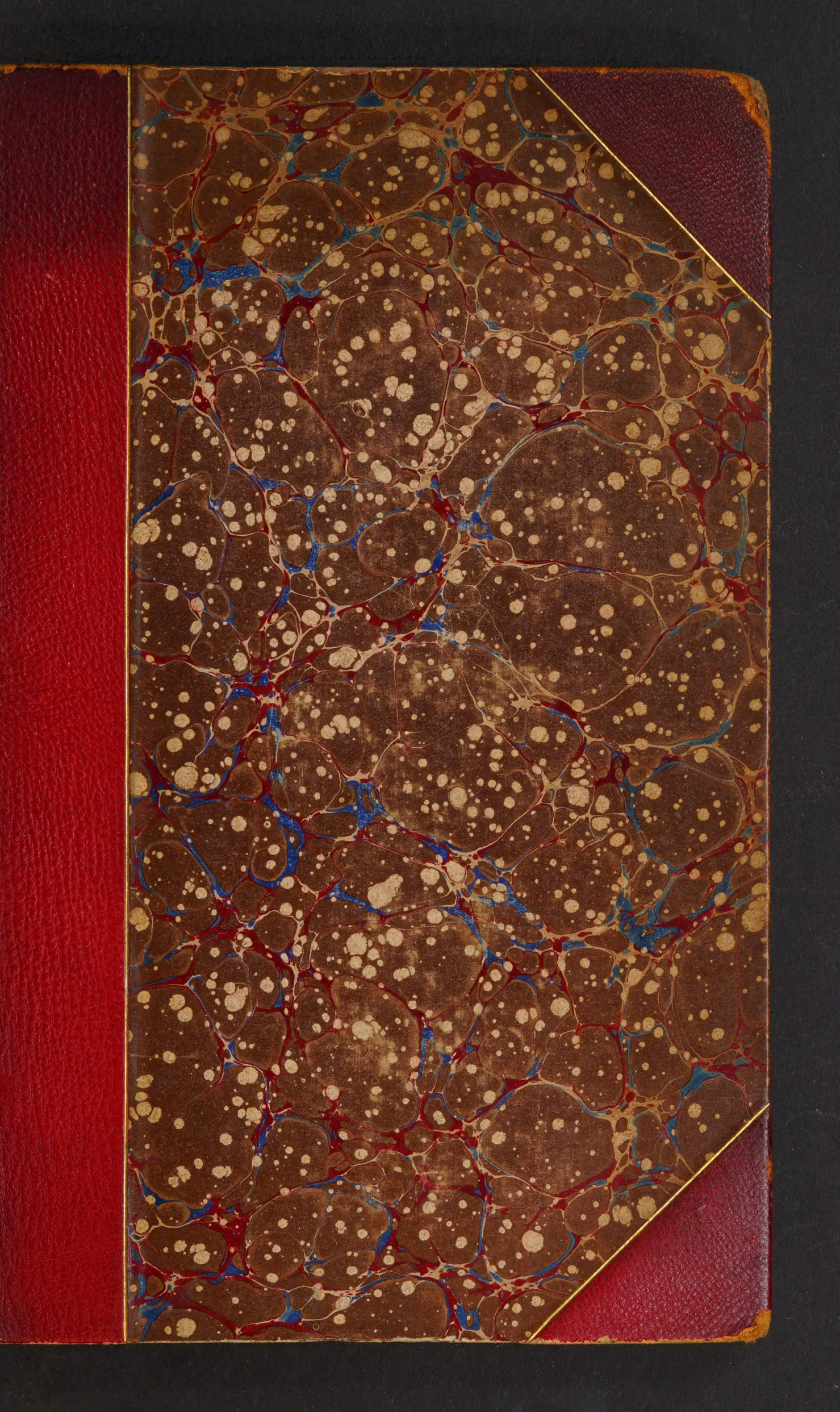

REPLY TO

MADWALLADER

D. COLDEN'S

VINDICATION

DUER

1819

A

REPLY

TO

Mr. COLDEN'S VINDICATION

OF THE

STEAM-BOAT MONOPOLY.

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Mr. COLDEN's VINDICATION

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STEAM-BOAT MONOPOLY.

WITH AN APPENDIX,

CONTAINING

COPIES OF THE MOST IMPORTANT DOCUMENTS REFERRED TO IN THE ARGUMENT.

By WILLIAM ALEXANDER DUER, Esq.

——— Fragili querens illidere dentem,
Offendet solido.———————

HOR.

ALBANY:

PRINTED AND PUBLISHED BY E. AND E. HOSFORD.

1819.

ADVERTISEMENT.

THE greater part of the following letter was written at intervals, during the summer and autumn of the last year; but a severe indisposition having prevented the author from completing it, he resolved (for reasons which will be obvious to the reader,) to lay aside his work, until after the adjournment of the session of the State Legislature, then about to open. He doubts, however, whether he should even yet have found leisure, or felt the inclination to prepare these sheets for the press, if his adversary had not lately thought it expedient to print and circulate a second edition of the Pamphlet to which they are intended as a Reply.

Albany, August 2d, 1819.

A REPLY, &c.

To CADWALLADER D. COLDEN, Esq.

Sir,

WHEN your unwarrantable attack on the Report of the Select Committee, upon Mr. Ogden's Memorial, compelled me to step forward in defence of measures for which I felt myself responsible, I was by no means unmindful of the invidious nature of the task. I was aware of the jealousy with which persons invested with exclusive privileges, regard those who scrutinize their claims, and I presumed, that in exact proportion as I should succeed in vindicating the Committee from your aspersions, and in establishing the facts and principles of their Report, I should hazard the resentment of every individual whose interest might be involved in the discussion.

From the part I had already taken in opposition to the powerful association, of which you are the champion, I knew, that I had awakened feelings by no means equivocal in their effects; and from the temper in which you had commenced the controversy, I had reason to conclude, that under whatsoever circumstances I might be driven to engage in it, my motives would be impeached, my opinions reprobated, and my language perverted. Independently of your Memoir, I had formed a previous

estimate of your talents and disposition, which enabled me, in some degree, to anticipate the character of your reply. For much bold assertion,—much confused reasoning,—much idle declamation,—much vehemence, and even much passion, I was prepared. But before the appearance of your "VINDICATION," I had, after all, no adequate conception of the animosity I was fated to encounter. The *odium theologicum*, which had once been proverbial, appeared to have given place to the vindictive malice of the baffled speculator; and the fastidious objector to "classical allusions," seemed to claim for his appropriate motto—

"OMNES HABENAS IRARUM EFFUDIT."

You have, indeed, poured yourself forth, Mr. Colden, without restraint and without disguise. You have assailed me with every weapon of ridicule and detraction. You would devote me to public contempt and execration, as a childish reasoner,—an obscure and half learned pettifogger,—an ignorant and corrupt legislator;—but fortunately, the attack is as impotent as it is violent;—I feel, that it cannot hurt me. You may degrade yourself, Sir, but I know, you cannot degrade me. Your motives are too visible; and the reputation, which it has been the business of my life to establish, is proof, I flatter myself, against your aspersions. Believe me, therefore, I can smile, and pardon the exasperated vanity of the unlucky author; and if I cannot overlook, I do not fear, the malignant rage of the alarmed monopolist.

Whether those for whom you have displayed so much devoted, but intemperate zeal, may not have cause to deprecate your friendship, is not for me, Sir, to

determine. It is enough, that I have found consolation in your enmity. To me, your vehemence is but the sign of false and wavering confidence in your strength. The virulence of your resentment is, of itself, proof of your own sense of its injustice; and the personal invective with which you labour to support your cause, will probably be interpreted by others into a confession of its weakness.

Your friends may indeed lament, that your "endeavour to refrain from any undue expression of your feelings,"* has not been successful; but, under all circumstances, it was certainly too much for them to have expected. In a case like yours, the influence of temperament, and the force of habit, are of themselves almost irresistible. But the peculiar acrimony which distinguishes the new progeny of your wrath, is, moreover, to be ascribed to the accidental combination of "deep personal interest in the controversy,"† with a scientific perception of its merits. If you had not been a lawyer, Sir, you never could have seen so clearly, that you were wrong; and if the fruits of your successful practice had not been supposed to be at stake, you could never have been so much irritated by the discovery or exposure of your error.

It is this happy union of personal feeling and professional skill, which gives to your malevolence its deliberate character—that "in the very whirlwind of your passion, begets a temperance that gives smoothness" to misrepresentations, which the solicitude of the party must have prompted; and enabled

* Vide Colden's Vindication, p. 9. † Ibid. p. 9.

you to resort to artifices which the experience of the advocate could only have suggested.

Willingly would I have declined a controversy commenced in such a spirit, and continued at such fearful odds—a controversy, in which I have no private or professional concern, and which, as it threatened to encroach largely upon my time, must (on that account, if on no other) prove detrimental to my interests. But you had left me no alternative. The nature of your provocation rendered it impossible for me to yield, with honour, to the suggestions of prudence; and although you thus forced me into the discussion, you now affect to consider the "vindication of the Committee," as merely the ostensible object of my former address to you. You attribute my letter, in the first place, to "anxiety to subserve the views of those who have an interest in destroying the exclusive right of Messrs. Livingston and Fulton;"* and then, with equal consistency and truth, you ascribe it to "hostility" to those against whom you charge me with having "enlisted with so much zeal,"—an hostility, which you characterize as "deadly," and impute to "some foundation deeper than the present controversy."†

To those, Sir, to whom I have the honour to be known, a formal denial of such charges, would, I think, appear superfluous; and those who are unacquainted with me, would probably deem a contradiction useless, which necessarily depends for its efficacy, upon the value of my own assertion. If my life and character are not sufficient to repel your slanders, I must rely for their refutation upon those

* Colden's Vindication, p. 4. † Ibid. p. 8.

circumstances which rendered the public vindication of my conduct, a proper and necessary act of self-defence, and shall rest contented in believing, that the intelligent and candid portion of the community, will not, in judging of my motives, be prevented by artful and uncharitable insinuations, from adverting to the nature of my provocations.

If I am not deceived, they will detect, throughout your latter publication, a fixed design to embarrass the real question in dispute between us, by the introduction of topics foreign to the argument. By the same expedient by which you hope to obviate all objections to your statements, upon the ground of your avowed interest in the controversy—you attempt to divert the attention of the public from the manner in which you have conducted it;—in excuse for epithets which grace your own composition, you allege that my language "would justify in retaliation, almost any terms which you might apply to me:"*—and truly, Sir, there are none, however vile or low, that you have thought unworthy of your service.

That there are passages in my letter in which I intended to express myself with strong and pointed severity, I never shall deny; but I insist, that in repelling your attacks, I was neither wanton nor indecorous. I did not certainly go out of my way to wound you; nor can I charge myself with a single remark which the subject of which I treated, did not properly suggest, or the provocation which I had received, amply justify. I felt, indeed, that I had been misrepresented and traduced, but I knew too well what was due to the public, as well as to myself, to indulge in passionate recrimination, vulgar sarcasms,

* Colden's Vindication, p. 11.

and insolent expressions of contempt. And believe me, Sir, that your example can never tempt me to shew myself regardless of those motives by which *gentlemen* are usually induced to restrain and moderate the public expressions of their feelings.

On your part, you are compelled to acknowledge, that a "zeal to vindicate the rights and interests of your friends, has led you to express yourself indecorously towards the Committee;" and you even condescend to assure the other members of that Committee that you had no intention of speaking of *them* with disrespect.* You are careful, indeed, to exclude me, (for I had the temerity to answer you) from the benefit of this acknowledgment; but yet you repeat your former charges, without exception of persons, or qualification of terms, and appeal to my book to prove that *what you had said of the committee was correct.*†

To sustain, and reinforce your former allegations in regard to them, is, in fact, the avowed purpose of your latter publication. Your former charges are again set forth with every circumstance of aggravation, and restated as the theses of your new discourse. You even avail yourself of that explanation of the views of the Committee which your own book had rendered necessary for their defence, as an apology for enlarging the bounds of the discussion, and for embodying in your "Vindication," every thing that had ever "been presented in support of the *Policy*, *Justice*, *Validity*, and *Constitutionality*" of your monopoly:‡—and after all this, you tell me, with rather more of frankness than consistency, "not to expect an

* Colden's Vindication, p. 13. † Ibid p. 13. ‡ Ibid. p. 13.

answer to my letter."* Believe me, Sir, the caution was unnecessary, my expectations were never immoderate, and I have the consolation to perceive that, on this occasion, I have not been disappointed.

The same motives, however, which induced me to repel your first attempts, now prompt me to resist your persevering efforts, to misrepresent and stigmatize my conduct. And although there are many passages in your "*Vindication*," which I may pass unnoticed, it is still my design to answer every part of it that can be supposed to merit that attention, in as nearly your own order as a due regard to perspicuity may allow.

I. You propose, in the first place, to vindicate, on the ground of "POLICY," the grant, made by this State, to Messrs. Livingston and Fulton, (as the possessors of a particular mode of propelling vessels by means of steam or fire,)—of the exclusive right to navigate the waters of this state, with boats so propelled, *upon any principle, or in any manner, then known, or thereafter to be discovered.*

This extensive privilege I had ventured to speak of as a MONOPOLY, and for this you not only impute to me an invidious design in the use of that term, but deny the propriety of its application. "MONOPOLIES," you say, "are the offspring of despotism, and can have their birth and being only under arbitrary government."† Indeed! Sir, do you seriously assert that a monopoly cannot exist in a republic? A respect to your station, and a recollection of your "five-and-twenty years of unremitted and devoted

* Colden's Vindication, p. 13. † Ibid. p. 17.

application to your profession,"* forbid me to impute to you gross ignorance of the meaning of a technical term of common use and known import. You must intend, Sir, that the purity of republics is such, that in them a monopoly will not be endured. And pardon me, if I suggest a suspicion that your description is the offspring of a new faith: the first fruits of conversion, laid at the foot of the political altar to which you had recently been led by some sudden inspiration of hope, or lingering disgust of antiquated principles and unrewarded service. If this conjecture be not unfounded, I may fairly presume that your definition was not so much intended for the enunciation of a truth to aid your argument, as for a sacrifice to propitiate and strengthen your dubious connections. I can scarcely persuade myself that in the long course of your professional researches, the following trite description can have escaped your observation: "Monopolies are sole grants of any trade or occupation, or of exclusive privileges, which ought to be common."

They are, then, from whatsoever source proceeding, grants against common right, and equally at variance with the principles of political economy, and the liberal spirit of the common law; they are regarded with an evil eye by both, as unfriendly to the great rule of *Public Utility*, and are only to be justified when, by their introduction, some public good is to be procured, or some public evil to be averted. Even a valuable consideration given for them cannot, in every case, indemnify the community; for they are excusable upon the sole ground of their subservience to the Public Interest; and it may be

* Colden's Vindication, p. 9.

doubted whether that great end is ever effectually served by laws, which philosophy disavows, and experience condemns. Unless, therefore, Monopolies promote this interest, whether they be the gifts of a monarch or the fruits of a blind bargain with a republic; whether conceded to court favourites, or obtained by the management of intriguing demagogues; whether their object be the private emolument of an iron crowned tyrant, or the gratification of a brawling tribune of the People: PUBLIC UTILITY is equally violated.*

But all discussion upon this point was idle and irrelevant. I had expressly admitted, in my Letter, that the Legislature could not, upon considerations of mere *policy*, "avoid or resume their own "grants; that they alone had authority to judge of

* "If the exclusive grant to Mr. Livingston be a Monopoly, "why then," it is demanded, "are not all Ferries, Banks, Toll-"Bridges, and Turnpikes, Monopolies?" To this I answer, that when altogether exclusive, they are. *The right of Ferriage*, "or "that exclusive right of receiving certain rates for the carriage "by water of persons and goods, which is usually granted to the "owners of the adjacent land, in consideration of providing and "supporting, under established regulations, boats necessary for "the public accommodation," is undoubtedly a species of Monopoly, and a very useful and beneficial one to the public. The mere incorporation of a *Banking Company*, is not, I apprehend, the erection of a Monopoly; for the Legislature, when it grants a Bank Charter, does not preclude itself from incorporating other Banks, even in the same place to which they may have confined the operations of the first. The Banks, for the time being, however, virtually possess a Monopoly of the trade, from the effect of what is usually termed "the Restraining Act." A law, which prohibits persons "unauthorised by law," from banking within this state, with as much policy and justice, as there would be in prohibiting individuals, unless "authorised by law," from buying and

"the measure, and the public faith was bound by "their decision."* The material enquiry is, whether, when the claims of the State grantees are brought into direct conflict with rights acquired under the paramount authority of the Union, the Legislature can, with propriety, define the limits of its own jurisdiction, and declare that it never intended to transcend them.

selling on commission, in case the COMMISSION COMPANY should suggest that measure. But the bank restraining law has never been publicly defended, but upon the ground of its *utility in preventing the evils apprehended to the community* from leaving the trade of Banking free. *Toll Bridges* are, or are not, Monopolies, according to circumstances. They are generally the private property of Individuals, or of Corporations, who are authorised by law to erect them over public water courses, and to receive certain tolls from all who find it convenient to pass them. Sometimes the acts establishing them, contain a prohibitory clause, preventing the erection of any other Bridge, or of a Ferry, within a certain distance, and in these cases they are so far Monopolies, equally, if not, in general, more useful to the Public than Ferries. *Turnpike Roads*, are not, strictly speaking, Monopolies. Companies are incorporated for the purpose of opening and constructing Turnpike Roads for the Public convenience; and upon acquiring, by purchase, the right of property in the land over which the road passes, they have an exclusive right to erect gates and receive tolls from passengers. But the Legislature may, afterwards, incorporate other companies, to open other roads in the immediate vicinity; and the towns through which a turnpike road passes, may, and they sometimes do, establish public highways so near, as to divert the whole travelling from it. The "attempt, therefore, to enlist against" me "the prejudices connected with" *Ferries, Banks, Toll-Bridges*, and *Turnpikes*, "I can-"not but think—a want of candour." *Vide Colden's Vindication, p.* 18.

* Vide Letter to Colden. p. 8, 9.

II. Your attempt to defend the grant to Mr. Livingston, upon the score of its "JUSTICE," might, for similar reasons, also have been spared.

I had informed you, in my Letter, that the Committee refused to "recommend a legislative decision "upon the objections which had been raised against "it, on account either of the prior subsisting grant to "John Fitch; the forfeiture of Fitch's right, without "proof of the facts upon which such forfeiture was "declared to have arisen; the unfounded suggestions "upon which it was alleged Mr. Livingston had ob-"tained a transfer of that right to himself; or the non-"performance of the condition upon which his title "was to have taken its effect:—because these were "questions which the Courts of Law, in the ordinary "exercise of their powers, would be competent to "decide."* And I should not now have felt myself bound to follow you into this branch of the controversy, had you not rendered that large portion of your pamphlet, which you have devoted to its consideration, a vehicle for the most offensive imputations upon the Committee, and the most unjust recriminations upon me.

However wide apart we are, in sentiment, as to the legitimate source of legislative power on the subject, there is one point, Sir, in which, I think, we are agreed; and that is, in acknowledging "the efficacy of a positive statute," (admitting it to emanate from constitutional authority) "to secure an ex-"clusive property in the fruits of intellectual la-"bour." By what strange perversity of moral sense,

* Vide Letter to Colden, p. 27, 28.

or obliquity of understanding, do you, then, maintain, that it was *right* and *just* in the Legislature, to repeal the law securing to JOHN FITCH the sole right of employing his invention of the Steam-boat, whilst, in the same breath, you contend that it would be *unrighteous* and *unjust* to interfere with the act by which this grant to Fitch was abrogated and annulled, and his privileges transferred to Mr. Livingston.

You remark, in support of this position, that "Mr. "Fitch did not ask the interposition of the Legis- "lature to enable him to *pursue experiments*," but that "he founded his claim to favour on his having ac- "tually established a beneficial mode of Steam Na- "vigation;" and you allege, that "the Legislature, "to reward his success, and *to secure to itself benefit* "*from an invention of so much utility*, gave him an ex- "clusive right." You deem it, therefore, absurd to suppose, that "he was to have the whole fourteen "years," for which his privilege was to endure, "to "put his plan into operation;" you argue, from this absurdity, that his grant actually "was upon condi- "tion implied, if not expressed, that he should avail "himself of it *within some reasonable time*:" and assuming this to have been actually a condition annexed to Fitch's law, you conclude that the State had a right, resting upon moral obligation, and moral duty, to repeal that grant, when they gave similar privileges to Chancellor Livingston.*

Unfortunately for your argument, the hypothesis upon which it rests, has no foundation in reality. A simple reference, Sir, to the act in favour of Fitch, will shew, that no condition whatever was attached

* Colden's Vindication, p. 25, 26.

to it. The preamble avers it to have been passed, "in order to promote and encourage so useful an "improvement and discovery, and as a reward for "his ingenuity, application, and diligence."* And whatever may have been the just "expectations" of individual members of the Legislature, of which you speak so familiarly, Mr. Fitch's employment of his boat upon the waters of this State, was no "part of "the consideration" upon which his privileges were obtained. "The very nature of the grant," as you have yourself so well observed, "excludes the sup-"position:" For if, as you say, he was to derive a benefit from it; that benefit could only result from his using it, previous to its expiration.† Hence, it is evident, that the Legislature must have thought it unnecessary to insist upon *that* as a condition of their grant, which the stimulus of private interest would at all events have insured.

The act in favour of Fitch having been passed before the adoption of the Federal Constitution, was, as you have accurately described it, "in effect a "*Patent* granted for a discovery, which it was repre-"sented, had not only been made, but had been ap-"plied to a boat, that was then already built."‡ But, when, Sir, let me ask, was it before pretended, that the grant of a Patent for a discovery or invention in any art or science, rendered it obligatory upon the Patentee to erect his machine, publish his work, or carry his improvement into actual operation? That you, Sir, should become the assertor of such a doctrine, does, I must confess, appear to me,

* *Vide* Letter to Colden, p. 88.
† Colden's Vind. p. 26.
‡ Colden's Vind. p. 54.

more inconsistent than any thing else to be met with in the history of this controversy. You admit with me, "that authors and inventors have a natural or "common law right in the fruits" as you express it, "of their mental labours."* But whilst I have endeavoured to shew, that the right of using and enjoying this species of property was a necessary incident to its acknowledgment, you have asserted, "that the right to property is very different from, "and indeed, entirely independent of the *use* or the "right to use."† On the one hand, I have regarded a Patent as the effect of a compromise, by which the *exclusive use and enjoyment* of the productions of genius were secured to the authors for a limited time only, in order, that the public might afterwards enjoy a common right to use them;—whilst you, on the other hand, have contended, that its only use and office was "to ascertain the property, afford the evidence of "title, and enable the Patentee to maintain his suit, "for the invasion of his rights."‡

Thus, Sir, in your zeal to justify the repeal of the State grant or Patent to Mr. Fitch, you lose sight of those principles upon which you afterwards rely, to prove the constitutionality of the grant to Mr. Livingston,—and without establishing the first point, not only admit, in contradiction to your doctrine on the other, that a right of property secured by Patent, necessarily includes a right to its enjoyment;—but insist, that, from the nature of such a grant, a condition is implied, which renders it obli-

* Colden's Vind. p. 108–109.
† Ibid. p. 104.
‡ Colden's Vind. p. 110.

gatory upon the Patentee, actually to use his invention, under the penalty of forfeiture, in case of his neglect.

So far, however, as respects "this part of the dis-"cussion," you admit, expressly, "that there was no "reason to question the perfection of Mr. Fitch's in-"vention, or the performance of his boat;"*—and, for the purpose of the present argument, I also am disposed to consider his success or failure equally immaterial. I am, moreover, willing to allow, that the grounds upon which you justify the resumption and transfer to another, of his privileges, might have been urged in the first instance, as strong reasons against the original grant to Fitch himself;—yet, had the condition which you merely imply from the terms of the law, been actually expressed, I should, notwithstanding the original impolicy of a grant so unbounded in operation, have denied, with the Council

* It has nevertheless been deemed important to swell the "Vindication" with "all the evidence which could be collected, to raise some doubts, whether the construction and performance of Mr. Fitch's boat were such as have been represented." It has not, however, been thought expedient to contradict or answer the testimony, which was adduced upon the subject in 1815, before the Legislature of New-Jersey. On that occasion, the most conclusive proof was afforded of Mr. Fitch's success, from experiments made *two years subsequent to the date* of Dr. Thornton's Letter to Dr. Lettsome; from certain expressions in which, a previous abandonment of the project has been inferred. If Fitch's Answer to Rumsey's Pamphlet, had not been removed from the "archives" of the New-York Society Library, the "Biographer of Mr. Fulton" might have ascertained, that Fitch had incontestibly established his prior claim to the invention,—the certificates and statements appealed to on behalf of Rumsey, to the contrary notwithstanding. Vide *Colden's "Vindication,"* p. 27–36, "Letter to Colden," p. 125, 126, Appendix—and ibid. p. 62.

of Revision, that the Legislature had any "right "resting upon moral obligation," to declare, that the vested rights of Fitch or his representatives, had become forfeited, without "proof of the facts upon which the forfeiture was alleged to have arisen."

And, had Mr. Livingston made the representation to me, of that extreme case, which, to illustrate your argument you have so ingeniously supposed,* I should have answered him in precisely the same terms, in which I have replied to those who have urged the total repeal of his own exclusive privilege, and told him, that the "*impolicy*" or "*improvidence*" of the grant would not excuse a violation of the public faith;—that questions touching its *validity* were of *judicial* cognizance;—and, in reference to the particular grounds upon which he sought the interference of the Legislature, I should have probably observed, that if "the grant to Fitch must neces- "sarily be understood, to have been upon condition, "that he should, within a reasonable time, give the "State the benefit of his invention,"†—the ordinary tribunals were competent so to expound it, as well as to adjudge, whether that condition had or had not been performed. I should, moreover, have declared to Mr. Livingston, my utter inability to conceive, why the existence "of Fitch's law should deter him from "carrying his new and advantageous principles into "effect," when it had not prevented him from making the experiments by which their efficacy had been ascertained; and I should have inquired, with due submission, whether, in case the prior right had be-

* Colden's Vind. p. 38. † Colden's Vind. p. 39.

come forfeited by non-user, he could not avail himself of that circumstance in his defence?

If he had remained unsatisfied, and had still pressed his application to the Legislature, I should have ventured to remind him, that the power of "granting "and securing the exclusive right to new inventions "and discoveries," had, since the grant to Fitch, been transferred by the Federal Constitution to the Government of the Union. If he claimed any right, derived from the supreme authority of that Government, and entertained well founded apprehensions of being interrupted in its enjoyment, by those who claimed under a State grant, I should then have acquiesced in a Legislative declaration of the paramount nature of his privileges, so far as to exempt them from the operation of the cumulative remedies given by Statute, to protect the rights granted by the State:—and if he insisted, that those remedies were incompatible with rights secured by the Constitution to every Citizen, as his natural birth right and inheritance, I should have promised him my feeble aid to procure the abrogation of such forfeitures and penalties, and to admit him upon equal terms to substantiate or defend his claims in the Courts of Justice.

But to obviate the force of that answer to your stated case, which you must have anticipated,—you next argue upon the supposition, that "there was injus- "tice in repealing Fitch's Law, and in conferring on "Chancellor Livingston, the privileges which had "been previously granted to another,"—but you contend, "that the injustice being towards Fitch or his "representatives, no other person had a right to

" complain."* You admit, indeed, that " if the Law " in favour of Chancellor Livingston, interfered with " the prior grant, the prior grantee or his representa- " tives, might, with great propriety maintain, that " the subsequent grant, *so far as it had deprived them* " *of any advantage, was unjust.*"

Now, where, and when, or to what purpose, Sir, were they to maintain that objection, if not before the Legislature, at the time of the meditated interference with their grant, and to the end, that they might prevent such interference? It seems, that you would rather have wished them patiently to have submitted to injustice, and then have trusted to time and chance, or the favour of a succeeding Legislature, to replace them in possession of their rights, in opposition to the powerful influence of Mr. Livingston and his connections: for you pretend, that " to authorize Mr. Fitch or his representatives to " make this complaint, they must have shewn, that " he or they attempted, or at least intended to avail " themselves, of the exclusive privileges conferred " by the act under which they claimed." Thus, throwing upon them the burden of proof, in regard to that omission or neglect, which, according to your own notions, was to have operated a forfeiture against them.

But, were this even incumbent upon the representatives of Mr. Fitch, what opportunity was allowed to them to shew their intention of availing themselves of their grant, before they were deprived of it? It is not pretended, that they had notice of Mr. Livingston's application to the Legislature, and the

* Colden's Vind. p. 41.

objection of the Council of Revision to the repeal of Fitch's Law, for want of "proof of the facts upon which the alleged forfeiture was said to have arisen, remains to this day unanswered.

You remark, however, with no little self gratulation and complacency, that "Governor Ogden un- "derstood *himself* too well, not to foresee, that no "one but Fitch or his representatives, could com- "plain of the repeal; and, that in order to meet the "objection, he procured from an administrator, "created for that special purpose, an assignment of "all Fitch's right to employ his steam boat on the "waters of this State, or elsewhere, for the con- "sideration of TEN DOLLARS." Whether you have correctly represented the circumstances under which Mr. Ogden obtained that assignment, is a matter in which I have no interest or concern. It is an affair, indeed, which like some others, has probably been settled amicably between you; and although your sagacity may, for aught I know, have detected, and your lurking resentment have exposed, his motives for the production of the document in question. The Committee, in their report, barely state the fact of its having been exhibited before them. They deduce no legal consequence from its existence, nor found one of their recommendations upon it;—on the contrary, they rather intimate an opinion adverse to its efficacy; for, they say expressly, "that "after the expiration of Fitch's Patent, the right to "use his invention, *became common to all the Citizens* "*of the United States.*"

But, if Mr. Ogden really meant to avail himself of his "technical right," with the intent of combatting

your objection, he seems to me to have chosen a fit weapon for that purpose;—and, considering, that at the time he thus "armed himself," Fitch's Patent had expired,—that the privilege granted to him by this State, had been transferred to Mr. Livingston,—and the Courts of Justice shut against an inquiry into the validity of that transfer,—I am inclined to think, that *ten dollars* were the full value of Mr. Ogden's purchase.

Be this as it may, it can have no bearing upon the question; nor do I conceive that to be varied by your suggestion, that Fitch or his representatives might, at a period long subsequent to the abrogation of their privileges, have had the opportunity of "ex-"hibiting their claims." The very circumstances of the repeal, may have compelled them to forego the "intention of executing his plan;" and even if it were true, that "no one has suffered injury by such "repeal," it would by no means follow, that "there "was no injustice in the act."* In all such cases, the wrong and the injury are one and the same. The community has a right to complain of faithlessness in the Government. The State as well as the individual is interested, that the public engagements be inviolably performed, and the public integrity most scrupulously preserved:—And although your moral sense may discriminate, the absolute revocation of Fitch's privileges, without notice, investigation, or inquiry, from a similar interposition of Legislative authority in regard to your own rights, I must confess, Sir, I can perceive no distinction between them. In both cases, the character of the repeal must neces-

* Letter to Colden, p. 88. Appendix B.

sarily be the same, and the arbitrary resumption by the Legislature of its own grant, an equal violation of its faith.

III. But the point which you labour with most assiduity to establish, and upon which my opinions are misrepresented with the most persevering exertions of malignant ingenuity, is the "VALIDITY" of the grant to Mr. Livingston, under the Act of March, 1798, notwithstanding the suggestions upon which it passed, were "not true *in fact.*"

Now these suggestions, as appears by the preamble to the act, were distinctly two. 1st. That Mr. Livingston was "*possessor of a mode of applying* "*the Steam Engine to propel a boat, on new and advan-* "*tageous principles,* which he was deterred from "carrying into effect by the existence of the act in "favour of Fitch," &c. 2d. That Fitch was "either "dead or had withdrawn himself from this State, "*without having made any attempt in the space of more* "*than ten years, for executing the plan, for which he so* "*claimed an exclusive privilege, whereby the same was* "*justly forfeited.*"

In reference to this part of the subject, the Committee, after setting forth in their Report to the House, the substance of the various Statutes passed for the benefit both of Mr. Fitch and of Mr. Livingston, and his different associates; and stating, as had appeared in evidence before them, "that Mr. Fitch "had, with great labour and perseverance, com-"pleted a Steam-Boat on the river Delaware, which "worked against both wind and tide with a very "considerable velocity, by the force of Steam only;

" declare, that in their opinion, the suggestions con-
" tained in the act of the 27th March, 1798, repeal-
" ing the act, granting the exclusive privilege to use
" Steam-Boats, within this State, to John Fitch, were
" not true in fact,—*the said Robert R. Livingston, not*
" *being the possessor of a mode of applying a Steam En-*
" *gine to propel a boat on new* AND *advantageous princi-*
" *ples ;* AND, *the said John Fitch having made a success-*
" *ful attempt for executing his plan, and having actually*
" *obtained a Patent therefor.*"

Although nothing could be plainer, than that the Committee here meant distinctly and severally to negate both these separate suggestions of Mr. Livingston, yet in your "*Life of Fulton*," you represent them to have founded their denial of the one, upon a single corroborative circumstance, which they had alleged in disproof of the other. You make them say, " that it is untrue, that Mr. Livingston was then,
" as those acts recite he had represented, in the
" possession of a mode of applying the Steam En-
" gine to boats on new and advantageous principles;
" *because Fitch had previously obtained a Patent.*"*

With reference to the passage, which in professing to quote, you had thus mutilated, I accused you of having perverted my obvious meaning, and now, so far from denying the charge, you pretend to misapprehend it. You affect to consider it limited to your suppression of those words which excluded the imputation of intentional untruth in Mr. Livingston; and you repeat and persevere in the original misrepresentation, except as to this particular suppression, and that,—you attempt to justify.

* Life of Fulton, p. 242, 243.

You pretend, in the first place, that the words "*in "fact,*" have no effect whatever in qualifying the meaning of the sentence of which they form a part;* i. e. there is no material difference between attributing to your opponent in an argument, a mistake in point of fact, and imputing to him the wilful assertion of a falsehood;—a distinction, Sir, which I must be permitted to say, that you, of all others, should have been the last to confound.

Next you maintain, "that the expression in the "sense given to it, ought not to have had a place in "the Report at all;" because, you allege, "*the un-"truth of representations sufficient to annul a Patent or "affect a grant from the State, is not merely a technical "untruth, but one that was deceptive, and fraudulent, and "injurious to the Public.*"† And is this really, Sir, your deliberate opinion? Do you, as a Lawyer, after "five and twenty years of the most unremitted "application to your profession," seriously maintain, that where a person in perfect good faith obtains a Patent for an invention, which he believes to be original, but afterwards appears to have been known for a century, he could enforce or defend his rights as a Patentee, even though he might be enabled to demonstrate his entire ignorance of the previous discovery, and vindicate his claim to the essential merit of an inventor? Or, where a grant of Land, for instance, were procured from the Legislature, upon suggestions confided in by all parties, that the tract thus to be ceded, had been excepted in all former alienations of the adjacent territory; and, that the person soliciting the grant, had for the pub-

* Vide Colden's Vind. p. 48. † Colden's Vind. p. 49.

lic accommodation as well as for his private benefit, incurred great expenses in improvements, from which he had as yet derived no emolument, and which, of course, would be totally lost, unless he could obtain the fee simple of the soil. Suppose, Sir, it should afterwards be shewn, that the Land thus granted, had been previously disposed of, or reserved by the State for a particular purpose;—in other words, suppose the suggestions upon which the grant in question was procured, "not true in fact," would you in that case contend, that those suggestions, though not "fraudulently" made, had not been "deceptive" in their effect, and "injurious to the Public?" And, that the grant could not consistently, with a due observance of the public faith be rescinded, if these facts were "found in some due course of Law?" If you were not so "much embarrassed by necessary "attention to other duties,"* as to deprive you of time and opportunity for reflection,—if your interests were not involved in the decision of these questions, or your passions inflamed by their agitation,—I am convinced, that even you, Sir, would never hazard the absurdity of answering them in the negative;—and yet the case I have last supposed, is strictly analogous in all its material circumstances, to that which we are considering.

Professing, afterwards, to proceed to the consideration of that part of the Report of the Committee, "in "the sense in which they intended it should be under-"stood," you are "led," as you express it, "into a "full discussion of the objection to the exclusive "right, that the first act," (meaning the act of 1798)

* Colden's Vind. p. 14.

" was passed on untrue suggestions;" but you immediately find it necessary to misrepresent the grounds and reasons of that objection, more grossly than before. You now make the Committee say, that " the " suggestions were not true in fact; *because* though " the Chancellor might have been the possessor of " a mode of applying a steam engine to propel a " boat; yet his representation was false in fact, *in-* " *asmuch as* his mode could not have been new and " advantageous, John Fitch having made a successful attempt for executing his plan of a Steam-boat, " and having actually obtained a Patent therefor."*

This is really admirable!—I cannot certainly, deny that the reasoning here imputed to the Committee is abundantly absurd, and the conclusion which they are stated to have drawn, a *non sequitur*, glaring and almost ridiculous. To shew this reasoning to be weak and inconclusive, I beg leave to offer an additional illustration, which as it aids and completes your argument, your gratitude will doubtless adopt, and insert, with a suitable acknowledgment, in the next edition of your pamphlet. Suppose some enemy, jealous of your reputation and success, should make the rash assertion, that you did not gain the lucrative and important station which you now " possess" by " a new and advantageous" course of conduct; because the same office was bestowed as the reward of " adhesion," upon the former incumbent. How silly would such a process of reasoning appear? How easy would it be to vindicate your originality by the most triumphant arguments? As Mr. Fitch and the Chancellor had a common object

* Colden's Vindication, p. 49.

in view, the navigation of a boat without the aid of wind or oars, so it may be said, that the same end, the attainment of office, was meant to be accomplished both by your predecessor and yourself. As steam was the power which Mr. Livingston, as well as Mr. Fitch, proposed to employ, it may be admitted that a common principle directed the conduct of both the official aspirants—a prudent compliance with the opinions and wishes of those who had the office to bestow.

But can any be so stupid as to think that this general resemblance ought to detract from the Chancellor's originality—or your's. Can any be so blind as not to see, that a difference, allowing the widest scope for the exercise of invention, might exist between the modes of applying the common power of acting upon the common principle? In what the difference actually consists, on which Mr. Livingston founded his superior claims, it may be difficult to determine: but, fortunately, Sir, in your case, (and it this which renders my illustration so perfect) no such embarrassment is found. That you have not barely excelled the accomplished politician who preceded you, but that you have attained your object with a skill and dexterity infinitely superior, will be admitted by all whom either an attention to the course of our State politics, or a philosophic curiosity, may have led to watch and compare the operations of two such distinguished artists.

Just observe, for the subject interests and warms me—observe the points of difference. One makes an open and public breach with his party, in the first instance; he abandons his friends, when they are still numerous, powerful, and sanguine in

their hopes of success. His desertion, therefore, excites a lively resentment, and draws upon him a peculiar odium. His appointment too is so conferred, as to seem the stipulated reward of services rendered. In all these respects, what a superior judgment have you not displayed? What tact in the choice of time:—What skill in the arrangement and management of circumstances! You leave your party, Sir, when despair had brought it to the point of apparent dissolution: even then you make no public declaration of hostility; you do not suddenly and openly desert, but win your way into the opposite ranks by a silent, and almost insensible progress. Through the whole process of your change, you contrived to maintain, with consummate ability, such a happy statesman-like ambiguity of conduct, that of the three parties, into which the State is divided, you were actually claimed by two, and not wholly rejected by the third, until the very moment you thought it prudent to declare in favour of Mr. Clinton, and——*the Mayoralty.*

But *finis coronat opus.* That office, the great object of your desires; the mark at which your ambition aimed; on which, through all your windings, and doublings, your eyes had remained constantly fixed, seems, to the world, at last to be conferred as an unsolicited, voluntary tribute, to your extraordinary merits: when as you, and *some others*, well know, it was obtained, as most offices are, *by negotiation*—negotiation, commenced by earnest solicitation, and consummated by actual—I mean to say, terminated, like all successful negotiations—*by the agreement of the parties on the terms of a treaty.*

Well, then, have you observed that the "conclu-
"sions of the *Committee* would appear very illogical,
"even if their premises were admitted."* I must con-
fess, I think so too. But I must again disclaim all
title, property, and benefit, or merit of discovery in
these "conclusions," as well as in the "premises."
They are both *inventions* of your own, to which I
never shall dispute your "exclusive right," though
founded on "suggestions" to which your conscience,
Sir, will prefix the appropriate epithet.

You deny, however, in the true spirit of polemical
chivalry, "that it was ever represented to the Le-
"gislature, that the Chancellor was in the actual
"possession of a mode of applying a Steam engine
"to propel a boat, *which he knew would have the desired*
"*effect*;† or which he had ascertained would be ad-
"vantageous." And, to confirm this new position, you
take the pains to transcribe "the title, preamble,
"and *first* clause of the act of 1798," and then ob-
serve, that the Committee treat *this* as if it were an
evidence of a representation having been made that
Chancellor Livingston was in possession of a mode
of applying the Steam engine on new principles,
which he had *ascertained* would propel a boat advan-
tageously; and "appeal to any unbiassed and un-
"prejudiced mind, whether, instead of any such
"meaning being conveyed, it is not manifest from
"the preamble itself, and more particularly from
"the first clause of the act, that the Legislature
"well understood that, though the Chancellor con-
"fidently expected success, yet he had not ascer-
"tained that he could command it."‡

* Colden's Vindication, p. 50. † Ibid. ‡ Ibid. p. 52.

Now, without stopping to inquire whether you adopted the antithesis, which concludes this sentence, immediately from Mr. Addison, or found it in your "*Common Place Book*," permit me to offer a different construction of the Law in question, founded not upon any particular expressions which a portion of it may contain, but upon a view and comparison of the whole, and every part of it. If I read that Statute rightly, Sir, Mr. Livingston suggested that he was possessor of a mode of applying the Steam engine to propel a boat on *new*, "as well as advan-"tageous principles;" but that he was "deterred," (not as you would have it) "from prosecuting his *experiments*," but "from carrying the same," i. e. this mode, &c. which was the ascertained result of those experiments, "into effect;"—first, "by the exist-"ence of a law" in favour of Fitch, and, secondly, "by the uncertainty and hazard of a very expensive "*experiment*, unless he could be assured of the ex-"clusive advantage of the same, if, on trial, it should "be found to succeed."*

Here, Sir, let me, by the way remark, that however powerfully the *expense* attending experiments in natural or mechanical philosophy, may operate to prevent men of science, as well as mere projectors, from engaging in them, yet it may well be doubted whether those persons are usually deterred from indulging in their favourite schemes or studies by the *uncertainty* or *hazard* which attend them. At all events, it is clear, that Mr. Livingston was not discouraged either by "uncertainty, hazard, or *expense*," from

* Vide Act 27th March, 1798. "Letter to Colden," p. 88. Appendix A.

making those previous experiments with " chaplets, " endless chains, duck's feet paddles," and a variety of other ingenious contrivances, too numerous to specify; upon which, it is by no means difficult to conceive, that he had " previously to 1798, expend- " ed large sums of money."*

But it was equally plain that he was " deter- " red, by the uncertainty and hazard of a very ex- " pensive *experiment*," from carrying his " mode of " applying the Steam engine to propel a boat on " new and advantageous principles, into effect." Now, what was the experiment which he had in view? If you had not thought proper, Sir, to cut short your extract from the Law, if you had transcribed the *second* section, as well as the " preamble and " *first* clause of the act," your readers might have been able to answer this question, without the labour of referring to the Statute book. They would have found it to read thus;

" *And* to the end that Robert R. Livingston may be " induced to proceed in an experiment which, if suc- " cessful, promises important advantages to this State, " *Be it further enacted*, That privileges similar to those " granted to the said John Fitch, in and by the be- " fore mentioned act, be and they are hereby ex- " tended to the said Robert for the term of twenty " years from the passing of this act: *Provided never- " theless*, That the said Robert shall, within twelve " months from the passing of this act, give such " proof as shall satisfy the Governor, Lieutenant- " Governor, and Surveyor-General of this State, or " a majority of them, of his having built a boat of

* Colden's Vindication, p. 52. 60.

" at least twenty tons capacity, which is propelled " by steam, and the mean of whose progress through " the water, with and against the ordinary current " of Hudson's River, taken together, shall not be " less than four miles an hour; and shall at no time " omit, for the space of one year, to have a boat of " such construction plying between the cities of " New-York and Albany."*

Thus, then, it is manifest that the " expensive expe- " riment," contemplated by Mr. Livingston, " *was the* " *construction of a Steam boat of at least twenty tons bur-* " *den, to be propelled at the rate of four miles an hour;* " which experiment, if successful, promised great " advantage to the State," by the establishment of a regular packet-boat of such construction, to " ply " between the cities of New-York and Albany," although the benefit to Mr. Livingston from such an establishment might be " uncertain," and the experiment " hazardous, unless he could be assured of " the exclusive advantage of the same, if, on trial, " it should be found to succeed:" And this, it was supposed, could only be secured to him by the grant of " the sole and exclusive right and privi- " lege of *constructing*, *making*, using, employing, and " navigating, all or every species or kind of boats, or " water craft, urged or impelled by the force of fire " or steam, in all waters whatever within the terri- " tory and jurisdiction of this State," which by virtue of an act passed before the adoption of the Federal Constitution, had been vested in John Fitch.

* Vide Act of 27th March, 1798, " Letter to Colden," Appendix A.

Let me, now, once more "appeal to any unbiassed "and unprejudiced mind," to decide whether "the "words of the Law preclude the possibility of a "supposition that the Legislature passed the first "act in favour of Mr. Livingston, under the impres- "sion that he had considered, or represented him- "self, to be in possession of a mode of applying "Steam, *which he had tried and ascertained beyond any doubt.*"* Whether he did not assert that the principles in his possession were *advantageous*, in the same positive and unqualified terms, in which he stated them to be "new?"—And whether it be more injurious to his character and memory, to say, that he was mistaken in that assertion, than to suppose that when he made it "*he had neither ascertained* "*or knew that his principles would be advantageous.*"†

So long, Sir, as the suggestions upon which that act was obtained, stand recorded in its preamble, it would not be safe to deny, that Mr. Livingston represented himself to be the actual "possessor of "a mode of applying a Steam engine to propel a "boat upon new and advantageous principles." These are his own words; adopted from the petition presented by him on that occasion—notwithstanding you now allege that "he had not then as- "certained that the application of these principles "would be *advantageous.*" Permit me, Sir, to ask, whether he had ascertained them to be "*new?*" or whether he contemplated any experiment for that purpose? It will hardly be pretended that he did: yet he might have been as much deceived or mistaken in supposing they were "new," as in believing them

* Colden's Vindication, p. 53. † Ibid. p. 53.

to be "advantageous." Whether, *in point of fact*, his principles were "new," or not, could be ascertained only by investigation and inquiry ;—never by experiment. But his assertion, in regard to both these qualities, is inseparably one : it is contained in the same conjunctive sentence ; the same expressions are applicable to either of them, and co-extensive as to both.

Mr. Livingston may have made no pretensions to the original discovery of that mode of propelling boats by means of Steam, of which he said he was "possessed ;" and certainly the Legislature did not profess to reward him as an inventor, but merely to encourage him to introduce his principles into practice. Yet the allegation of their novelty was as positive as the representation of their usefulness : but the latter must have been the material inducement to the grant, and a certain test was therefore provided, by which Mr. Livingston was to prove that his principles were really "*advantageous*," whilst his suggestion as to their being "new," was, from the nature of the case, taken at his peril. As to the one, he failed in the proof required by the condition of his grant; and whether his representations as to the other, were correct, or not, was immaterial, the Committee felt themselves "warranted in concluding," that his suggestion was "not true in fact," because his principles were not "*advantageous*."

You repeat, nevertheless, in your pamphlet, what you had before asserted in your "Life of Fulton," "that upon this point the Committee had no sort of "testimony before them." To refute this assertion, I thought, Sir, that nothing more was requisite than to refer, in my letter, to the Statutes passed subse-

quently to the act of 1798, for extending, from time to time, the period within which the proof required of Mr. Livingston, was to be produced, until his plan was finally relinquished, and Mr. Fulton's adopted in its stead. But you now contend that these acts afford no evidence whatever, to justify the report ;—still you admit that the " Statute book " proves that the Chancellor's attempts to *construct* " *a boat which would go four miles an hour*, were fruit- " less ; and that new hopes to accomplish this ob- " ject, were succeeded by new disappointments."* This, Sir, I humbly conceive, is admitting all for which it is necessary for me to contend ; for unless the principles of which Mr. Livingston was possessed, were such as would enable him, within the time limited, to propel a boat with that velocity, they were not " advantageous," within the meaning of the Statute, which had made that the test of their utility, and the condition precedent upon which the exclusive right to use them was to vest.

In the very case to which you appeal to shew, from the Statute book itself, its insufficiency to warrant the inferences of the Committee, you have, yourself, adopted this same construction of the Law. You state that " Mr. Fulton's experiments in France, in " 1802, had determined that he was the possessor of " a mode of applying Steam to propel a boat, on " new and advantageous principles ;" and that an act was passed in 1803, giving him, in conjunction with Mr. Livingston, an exclusive right: *Provided*, " they employed, within two years from the passing " of the act, on the waters of this State, a boat

* Colden's Vindication, p. 57.

" whose progress should be four miles an hour." You then observe, that " the condition of this act " not being fulfilled four years afterwards, that is, " in 1807, another act was passed, allowing Messrs. " Livingston and Fulton two years from this date, " *to fulfil the conditions on which the right depended.*" And you ask, whether " any one can doubt that Mr. " Fulton, in 1807, *did possess a mode* of propelling a " boat, *whose progress would satisfy the condition of the* " *act.*"* Hence, it is evident, that you consider Mr. Fulton's possession of a mode of propelling a boat *four miles an hour*, synonymous with his possession of a mode of propelling it *upon new and advantageous principles ;* for your argument would be without point or application, unless you meant that the efficacy of the mode he proposed in 1807, *to fulfil the condition of this grant*, was to be inferred from his having determined, by his previous experiments in France, " *that he was possessed of a mode of applying Steam to propel a boat on new and advantageous principles.*"† To avoid the ultimate conclusion to which your argument was meant to lead, I have simply to remark, that, after the act of 1807, Mr. Fulton himself, as well as the rest of the world, would have had two years, at least, to " *doubt*" in, if he had not sooner proved the efficacy of his mode of propelling Steam boats, by an actual compliance with the conditions of that Law; and if Mr. Livingston had ever afforded similar proof in regard to the plan which he possessed in 1798, the Committee would

* Colden's Vindication, p. 58.

† The same construction is again adopted in p. 90, of the " Vin- " dication."

not have denied that his principles were, in truth, "advantageous."

With respect to the other testimony upon this point, to which I adverted in my Letter, you observe that it is "curious," that "when the question "was, whether the Committee had before them evi- "dence to warrant their Report, I should have ap- "pealed to your "LIFE OF FULTON," which was not "written till afterwards." And you think it "equal- "ly inconsistent in me to refer to Stoudinger's Affi- "davit, because it was produced, as I had myself "mentioned, *subsequently*"*

Why, really, Sir, to whatsoever degree these circumstances may have excited your "wonder," I see no reason why you should convert them into proofs of my inconsistency. By referring once more to my Letter, you will perceive that I there took the liberty of asking you, whether the Committee "had not the "benefit of admissions for yourself, as the *Counsel* of "Mr. Fulton, which you had since repeated as his "*Biographer*."† To this enquiry you do not deign to answer; but to prevent, I presume, the charge of inconsistency from being retorted, you attempt to evade the question.

Before the Committee, Sir, it was not pretended that Mr. Livingston had succeeded in his own plan; nor did you think proper then to say, what you have since found it expedient to admit, that Mr.

* Colden's Vindication, p. 59. I am also accused of having "perverted the obvious meaning" of the passages in which Mr. Colden's admissions are contained; but by referring to my Letter, p. 60, 61, and the "Life of Fulton," 146—7, it will be found that I confined myself to a literal quotation of his own words.

† Letter to Colden, p. 60.

Livingston had abandoned his particular project when he connected himself with Mr. Fulton. And you have even conceded that it was upon the success of Mr. Fulton's experiment, that the certificate of compliance with the test imposed by the Legislature, had been eventually obtained. Your *subsequent* admission, and the Affidavit of Stoudinger, were not, assuredly, referred to by me as part of the testimony submitted to the Committee, but to corroborate their decision, and expose your injustice, by an appeal to evidence which you had yourself afforded, and to opinions which you had yourself expressed. The "real fact, that Mr. Livingston, upon the fail-"ure of his first experiment, relinquished his project "for a time," was then almost as notorious as it has since been rendered by a work of so much celebrity as the "Biography of Fulton:"—And it was then equally apparent, that if he had not abandoned all hope of its success, he never had, in practice, at least resumed it.

But the great burden of your complaint, and the charge which you seem to consider the gravest and most important, is, that the Committee proceeded in their investigation without having "testimony before "them, as to this mode of propelling boats by steam, "which the Chancellor possessed in 1798:" and you "feel the more confident, that when they made their "Report, they had no particular knowledge of it;" because I did not pretend in my Letter that they had.* No, Sir, I did not, indeed;—nor shall I ever pretend, that such information could have been of the least use or importance. "Whether in 1798,

* Vide Colden's Vindication, p. 60.

" the Chancellor had used chaplets, endless chains, " duck's-feet, or paddles,—horizontal, or vertical " wheels, or—all of them," was totally immaterial. It was enough for the Committee to know, that his plan had failed;—neither did I " attempt to evade your " allegation;"—I met it fairly, by asserting, that the Statute Book was sufficient evidence to warrant their Report.* For the preamble to the act of 1798, recites in the words of a Petition presented on Mr. Livingston's behalf, that " he had not been able to " comply with the conditions of the preceding act, " which rendered it obligatory upon him to prove, " within one year, that the principles upon which he " had proposed to construct his boat *were* advan- " tageous, by evidence of their successful operation " in practice."†

You assert, moreover, that " the Committee had " no evidence before them, which authorised them " to report, that the boats built by Livingston and " Fulton, were in substance the invention of Fitch;— " or to prove, that Daniel Dod had made important " and material improvements;—or that Governor " Ogden had built his boat on principles invented " by Fitch and improved by Dod."‡ And although you have multiplied words,—transposed sentences, —rung new changes upon threadbare phrases,— and resumed your former experiments upon the common sense and patience of your readers,—you have advanced neither argument nor evidence to support this charge. From the various forms, indeed, in

* Colden's Vindication p. 60.

† Letter to Colden, p. 59-66, and ibid. Appendix D. p. 90.

‡ Vide Colden's Vindication, pages 61 and 73.

which you have urged it, and from the contradictory terms in which you have expressed yourself in relation to it,—from its first promulgation in your "*Life* "*of Fulton*," to the last version of it in your Pamphlet,—I find it difficult to ascertain, with any degree of precision, what it is that I am called upon to answer.

In your Memoir, you refer the accusation to that part of the Report, which stated, that "the recitals "of the act of 1798, were untrue."* You there say, expressly, that "on *this point* the Committee had no tes- "timony before them."† All, therefore, that I thought necessary for your refutation, was, to specify in my Letter, the evidence by which it was satisfactorily shewn to the Committee,—first, that Mr. Livingston was not the "possessor of a mode of propelling boats "by steam, upon new and advantageous principles." And secondly, that Mr. Fitch *had* "within the space "of ten years, made an attempt to execute his plan "for a Steam-Boat." But in your "Vindication," you declare, that you "never said, that the Commit- "tee did not ask for testimony to prove what Fitch's "boat was, and how she performed."‡ The charge is diverted from its original foundation to the particulars just enumerated from your Pamphlet;—and although you now aver, that "these are the points on "which the Committee did not ask for testimony,"§ yet, "as to" two of them, "Governor Ogden's boat "and Daniel Dod's improvement," you call upon your God to witness, that "you never complained "of the Committee not being eager enough to hear

* Life of Fulton, p. 242.
† Ibid. p. 243.
‡ Colden's Vind. p. 73.
§ Ibid. p. 71.

"it."* Leaving it to you, Sir, to harmonize these various readings, and to reconcile that solemn appeal to received notions of propriety,—I shall proceed to examine the grounds upon which you ultimately determine to rest your complaint.

It seems, then, from your latest explanation, that you "did complain, and that you do yet complain, "that the Committee would not wait until Mr. Ful- "ton could be sent for, who, they were told, would "be able to give them every information *concerning* "*the Chancellor's boat*;—who would be able to shew, "how far his plan differed from Fitch's, and how far "the boats then established differed from all others, "that had previously been established;—whose *tes-* "*timony* would enable them to determine, whether "what Dod claimed as an invention, had not been "used before;—and if not, whether it was material "or important."†

With what justice you persevere in censuring the Committee, for refusing to suspend their proceedings, until Mr. Fulton should appear before them, I shall hereafter have occasion to examine. At present, I shall merely observe, that if any information with respect to the project which Mr. Livingston had so long before abandoned in despair, could possibly have been deemed material, it is clear, that Mr. Fulton, who had been absent from the country at the time of the Chancellor's experiments, could not have afforded it;—and, even if he were the only person who possessed any knowledge of that abortive plan, it is equally clear, that he was not admissible as a witness, either upon this or upon any other point, relative to

* Colden's Vindication, p. 74. † Ibid. p. 74.

the merits of a rival Patentee, which you relied upon his testimony to decide. When, therefore, you reiterated so frequently, that "it was upon *these* "*points* that the Committee would not hear testi- "mony," you should have taken, Sir, at least one opportunity of adding, that you meant the testimony of *a party in his own favour;*—and when you declared it "impossible, that any one could read my "book, without being satisfied, that we had no other "information than the representations of the Peti- "tioners,"* you ought in candour to have added, that the inquiry was *ex parte* in its nature. If, when you presented yourself as the Counsel of Messrs. Livingston and Fulton, the Committee indulged you with a hearing, you should have remembered, that no counter memorial or remonstrance had been referred to them by the House, and that you did not think it necessary to present any on behalf of your clients, until after the Committee had reported on the memorial of Mr. Ogden, which last, in fact, was all, that had been properly before them.

Whilst you admit, Sir, that the Committee "heard "all the witnesses, that Mr. Ogden chose to call, "and read every document which he chose to pre- "sent,"† you contend, that their "assertions betray "an entire want of information on the subjects to "which they relate;"—and you undertake, "with "the little knowledge you possess of mechanics, "and with the assistance of my Book, to prove, that "they knew nothing of the mechanism upon which "they expressed their unhesitating opinions."‡

* Colden's Vind. p. 74.

† Ibid. p. 74.

‡ Colden's Vind. p. 75.

Now, Sir, as no member of that Committee pretended to be so familiar as you are, either with the theory or practice of mechanics, as "their opinions "upon questions of a technical nature, were not "grounded on their own knowledge or experience, "but upon the facts before them,"* permit me once more to inquire, upon what else than the evidence adduced by the Petitioner could they have founded their Report? And was not that sufficient *prima facie* to support their statements, and warrant their opinions, in regard both to Fitch's Steam-Boat and Dod's improvement upon the engine? Your denial of these facts has given to them an importance which they may not intrinsically possess, and as it involves a grave imputation upon the conduct of the Committee, I think I shall be excused, for entering into that minute examination of the charge, and the grounds upon which you attempt to support it, which may be necessary for its complete refutation.

And first, Sir, as to that part of your accusation which relates to the invention of Mr. Fitch. Amongst the facts set forth in the Report, it is stated, "that "in the month of December, 1787, John Fitch, with "great labour and perseverance, completed a Steam-"Boat on the river Delaware, which worked against "both wind and tide, with a very considerable de-"gree of velocity, by the force of steam only;—and, "that on the 26th of August, 1791, after the adoption "of the Federal Constitution, the said John Fitch "procured a Patent from the United States, "for ap-"plying the force of steam to cranks and paddles.

* Vide Letter to Colden, p. 56.

" for propelling a boat or vessel through the water."* Upon these facts the Committee expressed their opinion, " that the Steam-Boats built by Livingston and " Fulton, are in substance, the invention of John " Fitch, patented to him in 1791: That during the " term of his Patent, he had the exclusive right to " use the same in the United States; and, that after " the expiration of that term, the right to use them " became common to all the Citizens of the United " States."†

Now, without pretending to controvert the Statement of the Committee, you deny the correctness of their opinions,—and as if I had not already explained myself upon the subject, you demand, very categorically, " what I mean by the boats of Messrs. " Livingston and Fulton being *in substance* the same " invention, which had previously been patented to " Fitch?"‡ In my Letter, Sir, I endeavoured to illustrate my meaning, by an example, which Mr. Fulton's own explanation in regard to the Steam Engine, appositely afforded; and I flattered myself, that I had succeeded in convincing you, that as the *substance* of the latter invention consisted in the actual appropriation of steam as a mechanical power, although its expansive force had long been known, and this particular use of it before suggested,—so the discovery of Fitch " consisted *substantially* in the " application of the means by which the force of " steam is so appropriated to a particular purpose

* Vide Report of Committee,—Letter to Colden, p. 99. Appendix K.

† Ibid. p. 103. ‡ Colden's Vind. p. 76.

" in mechanics," i. e. to propel a vessel;* and whatever may have been the nature or success of the projects and experiments of Jonathan Hull and my Lord Stanhope in England,—of the Abbe Arnald and the Marquis De Jeffroy, in France, or of any other foreign *savant* to whom you are so solicitous to transfer the honour of this noble invention, rather than that any countryman of your own, except Mr. Fulton, should enjoy it,—the Committee thought it evident, that Mr. Fitch was the first person in this quarter of the globe, at least, who had successfully applied the Steam Engine to propel a vessel, and the first at all events, who had established a *prima facie* title to the discovery, by securing the right to its exclusive use under the Laws and Constitution of the United States.

From a comparison of Mr. Fitch's Patent, and the drawings annexed to it with the Patents and specifications of Mr. Fulton, it was manifest, as I have already had occasion to notice, " that the most ma-
" terial difference between Fitch's boat and Fulton's,
" was, that in the one cranks were applied to pad-
" dles suspended perpendicularly from an elevated
" frame, and acting by an eliptical motion upon the
" water, and in the other, to vertical wheels."† Upon this explanation you remark, that " if plans " *differing so widely*, be in substance the same, then " all Steam-Boats are in substance the same."‡ But the very point to be determined, is, " *how widely do they differ?* And even if the difference which you assume, were positively shewn, the consequence which

* Vide Letter to Colden, p. 53. ‡ Colden's Vind. p. 76.
† Ibid. p. 61.

you deduce from it would by no means follow:—for, notwithstanding the substance of the invention consists in the application of the Steam Engine to propel a vessel through the water; yet the question, whether the plan of one Steam-Boat be essentially the same with that of another, can only, as I apprehend, be resolved, by comparing the identical boats with each other. In some instances, the difference may be so great, as to leave no resemblance between two given boats, except the common principle of the use of steam as a *primum mobile*. In others, it may be so immaterial, as to consist merely in a variance of the position and arrangement of the machinery, or in the contrivance of some subordinate parts of it, which might be transposed or exchanged at pleasure, and transferred from the one boat to the other, without any other alteration in the plan of either. As neither the Steam Engines nor the Ship are new inventions, the material inquiry must always necessarily refer to the principle upon which the one operates to propel the other. The question, therefore, in this case, is, whether the respective boats of Mr. Fitch and of Mr. Fulton, differ essentially, as to the mode in which the power of the engine is communicated to that part of the machinery which takes the purchase upon the water?

Now, it is to be observed, that neither Mr. Fitch nor Mr. Fulton pretended to any greater merit of invention, with respect to the Steam Engine, than they did in regard to the boats used in ordinary navigation:—for although the former states in his petition to the Secretary of State,* that, "from the

* Vide Appendix A.

" want of requisite experience and aid, he had ex-
" pended much time and vast sums of money in
" bringing his engine to perfection;" yet his *Patent* is simply " for applying the force of steam to *cranks* " *and paddles*, for propelling a boat or vessel through " the water;"* and in Mr. Fulton's specification, it is expressly declared, that *his* " invention does not " extend to the engine;"† but, to the " proportioning, " combining, and *applying* it in such a manner, to a " boat or vessel of such dimensions, *as to drive her to* " *a certainty, more than four miles an hour.*"‡

Neither does he consider the arrangement of the subordinate parts of the machinery, upon which you principally found his claims to invention, as of material importance. He observes, in his first specification, that these " are so familiar to all persons " acquainted with the Steam Engine, *and may be ar-* " *ranged in such a variety of ways*, as not to require a " description:"§ And in his second, he describes four different modes in which the Steam Engine may be applied *to cranks or crank wheels*, and a rotary motion thus conveyed to vertical water wheels upon the sides of a vessel;—but the species of motion which Fitch derived from his engine, and communicated by the same means of cranks to that part of his machinery to which the paddles were affixed, was a rotary motion. The peculiar movement of

* Vide Append. B. † Vide Append. D.

‡ By the second section of the " Act to promote the progress of " useful arts," passed Feb. 27th, 1793, it is declared, " that simply " changing *the forms or proportions* of any machine or composition " of matter, in any degree, shall not be deemed a discovery." Vide Laws U. S. vol. 2. p. 201.

§ Appendix C.

his propeller, was, indeed, different from that of Mr. Fulton's:—for the one was acted upon indirectly, and the other directly, by the cranks. The first operated by a secondary motion, distinct from the revolution of the cranks, while the latter was necessarily confined to the primary revolving motion of the wheel;—but the wheel or the paddle might have been applied indifferently to the cranks of both engines, and the one species of propeller substituted in the place of the other, without alteration of the boats or engines.

A Steam Engine of sufficient power, having once been fitted to the respective boats, and a rotary motion obtained by the same means in both, Mr. Fulton might have attached to his cranks or crank wheels, an apparatus for moving paddles, either according to the invention of Fitch, or upon the plan lately exhibited in "*The Stoudinger;*" and Mr. Fitch, with equal facility, might have adapted to his cranks, bucket or paddle wheels, similar to those used by Mr. Fulton. These paddle wheels were indeed suggested to Mr. Fitch; but, from the small scale on which his boats were built, he objected to them, on account of the waste of power from the horizontal stroke of the buckets upon the water, and their lift in rising.* He preferred, therefore, to take his purchase upon the water, by moveable paddles suspended perpendicularly, either from the sides or stern of his boat: And it was in proof before the Committee,

* Vide a small Pamphlet, entitled "*A Short Account of the Origin of Steam Boats,*" written by Dr. Thornton, and published at the City of Washington, in 1814. *Vide quoq:* the certificate of Oliver Evans, Append. E.

that he had been enabled with this sort of propellers, "*to drive his boat more than four miles an hour.*"

Mr. Fulton, on the contrary, preferred water wheels with fixed paddles,—and the diameters of these wheels being in proportion to the larger size of his vessels, the objections which operated upon the mind of Fitch were obviated. But the mode in which the former applied them to his boat, and the principle upon which they were made to operate, were the same which had previously been adopted and practised with moveable paddles by the latter; and whether Mr. Fulton meant to claim the use of water wheels to propel a vessel, as his own discovery, is at least doubtful, from the specification to his first Patent. "*I prefer*," he says, "a propelling "wheel or wheels to take the purchase on the wa- "ter;" and "hitherto," as he expresses himself, "I "have placed a propelling wheel on each side of the "boat, with a wheel guard outside of each of them, "for protection. A propelling wheel or wheels, may, "however, be placed *behind the boat*, or in the centre "between two boats."* In his second specification, which seems to have been intended to remedy the defects of the former, the most that he pretends, is, that "having been *the first to demonstrate the superior* "*advantages* of a water wheel or wheels, I claim as "my *exclusive right*, the use of two wheels, one over "each side of the boat, to take the purchase on the "water."†

The use of water wheels in navigation, appeared, however, from a work quoted by Mr. Ogden, to have

* Vide Append. C. † Vide Append. D.

been known in England upwards of a century ago;* and the fire ship patented by Mr. Edw. Thomason, of which a model was presented to the British Admiralty, in 1796, contained vertical wheels at the sides, *operated upon by a Steam Engine.*† They had not only been suggested to Mr. Fitch by Dr. Thornton and Mr. Evans, and actually used in subsequent experiments upon our own waters by Mr. Samuel Morey and Dr. Burgess Allison,‡ but what is more remarkable, Morey's experiments had been witnessed in the year 1794,§ by Mr. Livingston himself; and

* Harris's *Lexicon Technicum*, London, 1710. In the year 1737, a Patent was granted by the Crown to Jonathan Hull, for "a "machine by him invented, for carrying vessels or ships out of or "into any harbour, port, or river, against wind and tide or in a "calm." This "machine" was a boat with a water wheel over each quarter,—moved by means of ropes passing round the periphery, and propelling the boat by means of paddles fixed to their axis;—the ropes were brought within the boat, probably to a capstan, and the first motion obtained from animal power.

N. B. *Since the above note was written, I find it stated in an article of the Quarterly Review, for December,* 1818, *on the authority of a Pamphlet published at the time by* Hull *himself, that this boat was actually set in motion by means of the atmospheric Steam Engine then in use.*

† Vide Repertory of Arts, vol. 10th. p. 300, where a plate will be found representing the boat in operation, with a Steam Engine and four paddles fixed to the axis of a wheel on each side of the boat. I take my reference from minutes of the evidence adduced by Mr. Ogden.

‡ Vide History of the Steam-Boat Case, Trenton, 1815, and Letter of Dr. Allison, who was one of the Chaplains to the late House of Representatives of the United States, Appendix G.

§ Vide Letter of Mr. Morey, Appendix F. This gentleman has obtained much celebrity as a Civil Engineer, by the planning and execution of the canals, locks, inclined planes, &c. at Bellows' Falls, on Connecticut River.

the use of water wheels had been actually proposed to him in 1798, by his associate, Mr. Nicholas I. Rosevelt; but they were rejected, because Mr. Livingston was at that time "perfectly convinced of the "superiority of the horizontal wheels, which he had "adopted."*

Mr. Fulton may, nevertheless, have given the first practical demonstration of the superiority of the

* I have seen the correspondence which took place on this occasion, between Mr. Rosevelt and Mr. Livingston. Six months after the act of March, 1798, was passed, they were jointly engaged in a course of experiments, to ascertain, whether Mr. Livingston's plan could be rendered advantageous or profitable. In a letter of September 6th, 1798, Mr. Rosevelt, after stating from a final experiment, that the engine was perfect, but, that any attempt with Mr. Livingston's wheels would be fruitless, proceeds as follows:—"*I recommend the throwing of two wheels of wood* "*over the sides, fastened to the axis of the fly, with eight arms* "*or paddles; that part which enters the water of sheet iron, to shift* "*according to the power she requires, whether deeper in the water* "*or otherwise; and, that we navigate the vessel with these, un-* "*til we procure an engine of proper size, which, I think, ought* "*not to be less than* 24 *inches cylinder,*" &c. He then observes, that "perseverance and confidence" were required; and adds, "that "he thinks, *with such wheels the State Patent may be secured.*" In answer to this, Mr. Livingston, in a letter from Clermont, of the 18th of the same month, acknowledges the complete power of the engine,—laments, that they had wandered into conjectures, instead of following plain calculations,—prescribes further alterations in the depth of the wheels, and adds, "*I say nothing on the* "*subject of wheels over the sides, as I am perfectly convinced by* "*a variety of experiments of the superiority of those we have* "*adopted.*" Mr. Colden was subsequently connected with Mr. Rosevelt in a saw mill, worked by the very engine to which the latter alludes in his letter to Mr. Livingston, and from his intimacy with both parties, he could hardly have been ignorant of the facts developed by this correspondence.

vertical wheel; but his principle, and the power by which he moved them, were the same by which Fitch had operated upon his paddles, and for the use of which he had obtained his patent, as the inventor. The forms and proportions of their respective boats did not differ so much as the several vessels constructed by Mr. Fulton vary from each other.* They both availed themselves of the best

* It is stated in the "*Short Account of the Origin of "Steam-Boats,*" already referred to, that Fitch's boat was eight feet wide by sixty long, and Mr. Fulton's first boat, twenty feet wide and one hundred and fifty feet long; in both cases, exactly seven and a half times the length of the breadth. To account for this and some other coincidences between them, Dr. Thornton mentions, that Fitch went to Europe at the request of the late Aaron Vail, Esquire, United States' Consul at L'Orient; who, being one of the Company, formed by Fitch in Philadelphia, was solicitous to have Steam-Boats built in France;—and he asserts, that Mr. Vail afterwards permitted Mr. Fulton, when in that country to examine all the papers and designs, relative to Fitch's Steam-Boat, which had been left in the possession of Mr. Vail. This statement is corroborated by a letter from Mr. Nathaniel Cutting to Ferdinando Fairfax, Esquire, of Virginia, of which the following is an extract:—"At this point of our conversation, Mr. Vail "observed, that Mr. Fulton was not the first among our country-"men, who had succeeded in propelling a boat by steam: And "then took occasion to relate the success that had attended the "efforts of a Mr. *Fitch*, many years before; who, notwithstand-"ing the demonstration he had given of its feasibility, had found "it impossible to procure funds sufficient to carry his plan into suc-"cessful operation: That Mr. Fitch came to France in pursuit of "this object; but could not obtain the pecuniary aid requisite for "his purpose; and after exhausting his patience and the limited "means at his disposal, he deposited his specifications and draw-"ings in the hands of Mr. Vail, and quit the pursuit in France.— "Whether he died abroad or returned to America, I do not re-"collect.

Steam engine they could procure; but from the circumstances of the times, the want of pecuniary resources, and the low state of the mechanical arts in this country, at the period of Mr. Fitch's experi-

"Mr. Vail further remarked, that he himself was not sufficient-
"ly acquainted with mechanical combinations, to know, whether
"or not the mechanism now intended to be used by Mr. Fulton,
"was the same *in principle* with that formerly invented and used
"by Mr. Fitch; but it might be the same for aught he knew: for
"*he had lent to Mr. Fulton, at Paris, all the specifications and draw-*
"*ings of Mr. Fitch, and they remained in his possession several*
"*months;* and doubtless, a man of Mr. Fulton's ingenuity, would
"not fail to profit by any new and useful combination of the me-
"chanical powers, that he might then discover, especially as he
"might suppose, no one living would convict him of the plagiar-
"ism." The following letter from a gentleman of high respectability, in this State, serves still further to confirm the above accounts.

"*Troy, November 17th*, 1818.

"DEAR SIR,—

"I yesterday saw James Vail, at present of Lansingburgh; he
"resided with his uncle Aaron Vail, at L'Orient, at the time Chan-
"cellor Livingston arrived in France;—he distinctly recollects
"seeing, and often examining in the hands of his uncle, Fitch's
"papers and designs respecting his Steam-Boat, and has frequent-
"ly heard the Chancellor and his uncle conversing on the subject
"of the Steam-Boat, but does not recollect having seen those
"papers and designs delivered to the Chancellor, though he has
"no doubt, they were shewn to him. Vail is an intelligent young
"man, and possibly may, on reflection, recollect circumstan-
"ces, that are material in your present inquiries;—should this be
"the case, or should you wish any certificate from him, and my
"services in this or any other business, be of use to you here, you
"will oblige me by commanding them.

"I am, very respectfully,

"Your ob't. servant,

"JNO. D. DICKINSON.

"WILLIAM A. DUER, ESQ."

ments, he was compelled to resort, for his engine, to plans and descriptions which he found in books, and then to rely on the imperfect production of his own labour. Whilst Mr. Fulton was enabled to command every modern improvement, and to import from the work-shops of the inventor, the most complete machinery that was known in Europe. If, therefore, he excelled his less fortunate, but not less ingenious, predecessor, it is to be ascribed to the gigantic agency of his *primum mobile*, rather than to the superiority of that subordinate part of his machinery, in which alone he differed from him—not in the principle, but simply in the mode of operation.

You contend, however, that if there were this identity between the plans of Mr. Fitch and Mr. Fulton, "then wheels and paddles are, in substance, "the same."* But when it is affirmed merely that those plans are the same *in principle*, nothing can be more fallacious, Sir, than to assume that their entire and complete identity is maintained, and then proceed to refute that gratuitous assumption, by proving a variance between the two plans, in that very unessential particular in which their difference had been admitted to consist. To have met my argument, it was certainly not necessary to establish, by a formidable train of reasoning, that wheels and paddles are not the same thing; but you should have shewn that the superiority of the one to the other depended upon a difference in the principle upon which they were applied, as instruments to propel a vessel, and such as to render two Steam boats, in which

* Colden's Vindication, p. 77.

they were respectively used, essentially different inventions. That no such distinction as this exists, is, I think, capable of demonstration, notwithstanding you, Sir, suppose it "not difficult to point out at "least one substantial difference between" these two species of propellers.

On this point you contend, in the first place, "that the paddles must move with much more than "twice the velocity of the Boat, because half its "motion is lost in recovering its motion, after hav-"ing made its stroke."* But pray, tell me, how much of the motion of a bucket or paddle of a wheel is lost in recovering its position? Instead of half, certainly not less than three-fourths; for it must make not only a retrograde movement proportioned to the diameter of the wheel, but perform a revolulution equal to its circumference. The quantity, then, of inefficient motion, would, according to your own argument, be much greater in the bucket of a revolving wheel, than in a paddle fixed at some point of its length, or at one of its extremities, to a centre, and describing, at the other end, the segment of an elipse.

The relative velocities of the bucket of a wheel, of a paddle, and of the boat itself, are, however, dependent on other and entirely different circumstances. Mr. Fulton, in his first specification, has stated (whether correctly or not, it is not now necessary to inquire) that the buckets of a wheel must move with twice the velocity of the boat; and assuming this position as a fixed principle, he makes it the basis of a variety of calculations. But what, Sir, is your

* Colden's Vindication, p. 77.

doctrine upon the subject? Why, that "if the buc-"ket of a wheel be justly proportioned so as not to "drive the water, the progress of the boat will be "*exactly equal* to the motion of that part of the wheel "which moves on the surface of the water." That the resistances of the buckets and of the boat to the water, may be so "proportioned" as that "the pro-"gress of the boat will be exactly equal to the mo-"tion of that part of the wheel which moves on the "surface of the water," is readily admitted. But surely, Sir, you cannot mean that such proportionate velocities are the most efficient—that this singularly curious and arbitrary position is to be adopted as a *formula* that cannot be deviated from in practice, without a loss of power;—to say nothing of its direct opposition to the principle assumed by Mr. Fulton.

If the water cannot, as you observe, "afford an "immoveable fulcrum," I would ask, how "the "buckets of the wheel" can be proportioned so as not to drive the water? And yet, "in this respect," you say, "the wheel and the paddle lose equally."—Which is, in fact, admitting, in the teeth of your former assertion, that both actually do drive the water.

"But," it seems, "the loss of the retrograde mo-"tion is peculiar to the paddle:"—Who does not at once see that each bucket of the vertical wheel after leaving the water, must make a retrograde, and, at the same time, a circular movement, before it can again enter it? And who, therefore, will refuse to acknowledge that the efficient motion of a paddle moving in an elipse, of which the shortest diameter is perpendicular to the horizon, is, of course, *less* than that of the bucket of a water wheel?

As an inevitable consequence of the loss sustained by reason of the retrograde motion, you make this assertion, that "the paddle to drive the boat "twelve miles an hour, must move more than twen- "ty-four miles an hour."* The fallacy, however, of such a deduction is obvious, for in order to render your reasoning conclusive, it requires no more than common sense and common observation, to discover that the boat ought to come to a full stop at every retrogradation of the paddle; or else it must be denied that the propelling instrument participates in the effect of the motion which it communicates to the vessel, or accompanies her in her progress.

There is nothing, therefore, in the retrograde movement, either of the paddle, or of the buckets of a water wheel, by which a substantial difference between them can be shewn. That a material preference may exist in favour of a wheel with many buckets in comparison with a single paddle, will not indeed be questioned; for it is evident that the buckets of a wheel must follow each other in quicker succession than the strokes of a single paddle can possibly be reiterated: in each revolution of the wheel ten or twelve buckets are made to act on the water; whereas a *single* paddle can make only a single stroke at each revolution of the crank. But what justice or consistency is there in comparing the action of an entire wheel, having many buckets, with that of a single paddle? Each separate bucket of the wheel may be so compared; but I have already shewn that each bucket

* Colden's Vindication, p. 49.

taken separately, must, of necessity, lose more by inefficient motion, than a single paddle.

That both acquire an increased velocity, in passing through the air to recover their operative position, will be readily perceived, by considering that the axis of the crank which moves both the wheel and the paddle, advances as quickly as the boat to which they are respectively attached. In the one case, this accelerated motion is compounded of the boat's progressive motion, added to the wheel's rotary motion; in the other, the progressive motion of the boat is combined with the eliptical motion of the paddle. To this it may be answered, that the buckets, being fixed to a wheel revolving about a point stationary with respect to the boat, their average motion cannot exceed that of the shaft of the wheel—i. e. of the boat itself. It may be replied, however, that where a set of perpendicularly supported paddles, is operated upon by cranks emanating from a common axis or centre of motion, and moved alternately one set forward and the other backward, the accelerated motion of the returning paddles is always compensated by the reversed action of those which are in the water, precisely as is the case with the buckets of a revolving wheel.

In different circumstances, the one contrivance may, undoubtedly, be superior to the other. In vessels of heavy burden, the water wheel may be used to greater advantage; whilst for a small boat, which will not admit of a wheel of large dimensions, you have yourself conceded, "that paddles may be preferable,"* But you have failed, Sir, to demonstrate any difference

* Vide Colden's Vindication, p. 78.

of principle between these two species of propellers, when both are made to operate by cranks. I have shewn, on the contrary, that they are only to be distinguished from each other in the mode of their operation, and, consequently, that the only material variance of the boats of Fulton from those of Fitch, being thus resolvable into the difference between fixed and moveable paddles, the Committee were warranted in concluding that they were "in sub-"stance THE SAME INVENTION."

I now proceed, in the second place, to consider your objections to that part of the Report, which relates to the invention of Mr. Dod. In regard to these improvements, the Committee stated, "that "in the spring of the year 1810, the Petitioner "applied to one Daniel Dod, also a citizen of the "State of New-Jersey, to make a Steam engine of "power sufficient to drive a boat of a proper size "from Elizabethtown to New-York; and that the "said Daniel Dod did thereupon, without ever "having seen Mr. Fulton's Patent or Specifica-"tion, make a small Steam engine as a model; in "the making of which he invented some improve-"ments (as the Committee believed) of great im-"portance, for which the said Daniel Dod after-"wards, on the 29th of November, 1811, obtained "a patent from the United States:"*—And in expressing their opinions more at large, the Committee added, in reference to this particular statement of the fact, "that the improvements and inventions of "Daniel Dod on the Steam engine are important

* Letter to Colden, Appendix K.

" and material, and that the said Aaron Ogden has
" built his boat upon principles invented by John
" Fitch, improved by the said Daniel Dod."*

Animadverting upon this opinion, you observe, in the first place, " that Governor Ogden, with a de-
" sign to avoid any question under Fulton's patent,
" built his boat without the bucket wheels at the
" side, without wheel guards and wheel covers, and
" attempted to drive her by a wheel in the stern,
" then," (you add very facetiously,) " she may have
" been built upon principles invented by Fitch, as
" improved by Dod, and was *good for nothing*.
" But when she got Mr. Fulton's bucket wheels at
" her side, his wheel guard and wheel covers, then
" she was, *in substance*, the invention of Fulton, not-
" withstanding she had what Daniel Dod claimed
" as his invention and improvements."†

How, Sir, is it possible that Mr. Ogden could have hoped, by placing his wheel at the stern of his boat, to have evaded the consequences of an interference with Mr. Fulton's inventions, when he knew that Mr. Fulton's patent embraced that very mode of applying the propellers, as well as the plan of using them upon each side of the vessel ?‡ Again, Sir, if the project of propelling the boat in this way was afterwards abandoned, and it was thought better to refit her with the wheels upon the sides, how did she then become the invention of Mr. Fulton, when the same mode of placing the propellers had been adopted in some of the experiments of Fitch, and when these same propellers had been applied by Hull, by Mo-

* Letter to Colden, Appendix K. † Colden's Vind. p. 79.
‡ Vide Appendix D.

rey, by Allison, by Thomason, and by others, long before Mr. Fulton had directed his attention to the improvement of Steam boats? And, lastly—If Mr. Ogden's boat, after her alteration became *substantially* the invention of Mr. Fulton, *how comes it that no suit was ever commenced for this violation of the patent rights of Mr. Fulton, when you allege that Mr. Ogden had at first built his boat differently in order to avoid prosecution on that very ground?*

Leaving you to answer these questions at your leisure, allow me, as the opportunity presents, to return for a moment to the examination of those parts of Mr. Fulton's patented inventions which have hitherto escaped attention. His claims to the water wheels we have disposed of; but his title to the *wheel guards and wheel covers*, to which you have first alluded, may rest upon a more solid foundation. They do not appear, indeed, ever to have been applied in the same form or to this particular species of machinery, before they were adopted by Mr. Fulton: nor did they enter into his original design. They were the obvious result of practical observation, suggested to him, (as they would have been to any other ingenious man who had ever seen a fanning mill and a pleasure sleigh,) by experience of the accidents, to which the unprotected wheels of his first boat were exposed. They are certainly commodious and useful additions to his plan, but not, I suspect, those material improvements, which it would ever have been deemed necessary to secure by Patent, had the claim to originality, in respect to the essential principles of the invention, been interposed with equal confidence: For if Mr. Fulton possessed the exclusive right of an invention

to the water wheel, he need not surely have been solicitous to engross every possible mode of protecting them by guards and covers, which no person could have wished to appropriate, who did not possess the undoubted right to use the wheels themselves. But from the careful and minute description, which he gives in his specification of these particular improvements, and from the complacency, Sir, with which you have dwelt upon their merits, *wheel guards and wheel covers* seem indeed to be regarded as the most important of his discoveries. Perhaps, they are so; but to my view, I must confess, Sir, they appear no more proper subjects for a Patent, than the "fenders of wood or iron *of* "*any kind;*"—the invention of "placing the steering "wheel and steersman *further forward in a Steam* "*boat than is usual in other vessels;*"* or the improve-

* The great anxiety manifested to secure, by a *forestalling* specification, the exclusive right to *wheel guards, covers, and fenders*, of all sorts and descriptions, certainly betrays some lurking doubt or apprehension as to the water wheels themselves. For if Mr. Fulton had felt secure in his title to the latter, why should he have taken so much pains about those things which are mere accessories to their use? Apprehensive that the circumstance of his "having been the first *to demonstrate the superior advantages* of "the water wheel," might not be altogether sufficient to its exclusive use, he seems to have determined to prevent any other person from adopting the same propeller, except at a disadvantage; and notwithstanding he had placed guards round the outside of his wheels only, and had simply covered them with boards, he is not content with patenting these as his invention, but claims the exclusive right "*to project from the side or sides of a Steam boat,* "*beams, or timber, or spars, or fender, or fenders* of wood or iron "of any kind, to guard or protect the water wheels, whether by "boards, netting or grating, canvass or leather, *or in whatever* "*other manner it may be,* to prevent their throwing water on deck, "or entangling in ropes." Vide Appendix D.

ment of "*giving breakfasts, dinners, tea, and suppers to passengers, either in the cabins, or under an awning upon deck.*"*

Had the Committee, therefore, "possessed that "accurate knowledge," in regard to the first project of Mr. Ogden, which you consider so important; had they even "seen the marks of an abortive "birth," which, you say, are "still visible upon his "boat," I doubt, Sir, they would nevertheless have persisted in believing that she had been constructed upon "principles invented by Fitch, and improv- "ed by Dod." The importance of Mr. Dod's improvements you seem to admit, but you deny their originality; and suppose me to have given up the cranks for which he obtained a patent, because every body "must have told me that cranks were the very first "means applied to convert the libratory motion of "an engine beam into a rotary motion."†

Strange as it may appear, Sir, *nobody* ever had the condescension to "tell" me so but yourself; for really, it is not "every body" that can pretend to that intimate acquaintance with the history of mechanical inventions, which you, doubtless, claim by the same sort of title, if not from the same source of power, to which you owe your military skill—in virtue of an honorary degree from the "Philosophical Society;" or, from having been *brevetted* a CIVIL ENGINEER, by your Commander in Chief. Taking it, therefore, for granted you speak knowingly, as well as *authoritatively*, permit me to ask, whether there was but one mode in which these vul-

* Vide Appendix C. † Colden's Vind. p. 80.

gar cranks could be made to effect the purposes of their creation? Was there no room for improvement—no scope or latitude for invention? Had human ingenuity exhausted itself upon the subject, before Mr. Dod existed, or had its exercise been already claimed as one of the exclusive privileges of Mr. Fulton?

In the first two boats which were built by Messrs. Livingston and Fulton, it will be recollected that instead of the lever beam above the cylinder, as in Watt and Bolton's engine, there was substituted a triangle of cast iron on each side of its lower extremity. The two triangles were fixed on the same shaft, so that they worked together; and they were connected at one of the angles of their respective bases, to shackle bars or pitmen, descending on each side of the cylinder, from the cross beam in which was fitted the head of the piston rod. The angles at the respective bases of the triangular beam to which the pitmen were attached, moved therefore through a curve in a *perpendicular* direction, whilst their vertical angles, from which other shackle bars were connected with cranks, fixed at the sides of the propelling wheels, moved through a curve, in a *horizontal* direction; and in this manner a rotary motion was communicated to the wheels.

Now, instead of adopting these triangular beams and horizontal shackle bars, Dod retained the lever beam upon the top of the cylinder; attached the upper end of the piston rod to one end of the beam: and to obtain his rotary motion, he connected the other end of the beam with the head of a shackle bar or pitman, the lower extremity of which he fixed to a crank in the middle of the axis or shaft,

athwart the boat, upon which the wheels were hung, whilst a perfect rectilineal motion was given to the piston rod by means of the parallel link.* To perceive that this was a different, a simpler, and, in all respects, a better mode of converting the libratory into a rotary motion, than the cumbrous apparatus introduced for that purpose by Mr. Fulton, requires nothing but the exertion of that common sense which no *brevet* or *diploma* ever yet bestowed: for besides the evident saving in the friction, weight and expense of the machinery, the method used by Mr. Dod, induced the more material saving of room in the boat. Indeed it must have been from actual experience of the disadvantages of the old plan, that an alteration, similar in principle to that of Dod's, but by no means so simple in its contrivance, was adopted by Messrs. Livingston and Fulton, when they built the Paragon.

* It has since appeared that the same method of communicating the rotary motion to two wheels upon the sides of the boat, and connected by one axis athwart ships, had been adopted many years previous, by Mr. Morey, but it was not patented by him; nor does it appear that Dod had any knowledge of the fact. The most ingenious invention, however, for which this self-taught engineer has obtained a Patent, is an original method of driving a double set of wheels with a Steam engine, by means of *parallel lever beams*, suspended upon a pivot at their respective centres, and connected at their extremities by links, which Mr. Colden seems to have confounded with the common *parallel link*; a pitman then descends from opposite ends of each lever beam alternately, and drives both sets of wheels together. Thus, without a cog-wheel or toothed sector of any kind; he employs one Steam engine in a boat to drive four propelling wheels, and is enabled to avail himself of a larger proportion of propellers without making his wheels so wide as to project an inconvenient distance beyond the sides of the boat. *Vide infra* Append. I.

As to the parallel link, it will be found that Dod's Patent was not for its *invention*, but for a new and beneficial appropriation of that well known piece of mechanism. And although what you state, Sir, be true, "that a parallel link had been affixed by Bol-"ton and Watt to different parts of their engines, "many years before Mr. Dod could have thought of "it;"* you do not pretend it had ever before been applied in the same combination in which the latter had used it:—and if Dod did see it, as you suppose, "applied in many instances on board of Mr. Fulton's "boat," he could not possibly have seen it used there as "a simple and easy mode of giving a perfect "rectilineal motion to the piston rod, although it be "attached to the end of the beam which moves in a "curve,"—*because Mr. Fulton had dispensed with the lever beam above the cylinder, so that the piston rod of his engine was not, of course, by any means attached to it.*

Yet, Sir, you renew your former censures upon the Committee, for omitting to state, whether Mr. Dod had or had not seen the *boats* of Mr. Fulton, when they reported that the former had invented improvements upon the Steam engine, "without "having seen Mr. *Fulton's Patent or Specification.*" I informed you in my Letter, that the Committee "deemed it proper to notice that Dod had never "seen that specification, in order to guard against "the influence of his having availed himself of the "calculations contained in it *concerning the requisite* "*power of the engine in relation to the size and structure* "*of the boat.*"† But you still affect to consider it "a *singular idea;* that he might have been suspected

* Colden's Vind. p. 81. †Letter to Colden, p. 55, 56.

" of plagiarism if he had seen the patent or specifi-
" cation :—but that there would be no grounds for
" that suspicion if he had seen the boats themselves,
" of which the patent or specification is only a de-
" scription."* And as if it had been possible for you to have misunderstood my meaning, you ask, with apparent seriousness, " what connection Dod's " improvement on a Steam *engine*—his parallel link " had with calculations of resistances ?" Certainly no greater connection than they had with Mr. Fulton's invention of the Steam boat, which was precisely——none at all.

But you were aware, Sir, that those " calcula-
" tions of *resistances*," were not the calculations to which I had alluded ; and had I even omitted to specify the particular set of calculations which had been adverted to by the Committee, they were pointed to in the Report. It is there expressly stated, that Mr. Ogden applied to Dod to make a Steam " engine *of power sufficient to drive a boat of proper size* " from Elizabethtown to New-York ;—and that Dod " did thereupon, without having ever seen Mr. Ful-
" ton's patent or specification, make a small Steam en-
" gine as model, &c."† Hence the propriety of merely noticing that Dod had not seen Mr. Fulton's *Patent* or *Specification ;*—and the sincerity with which you profess to " believe that the calculations were " pressed into my service merely to afford an oppor-
" tunity of referring to the work of Charnock,"‡ are equally apparent.

I shall soon be led to inquire into whose " service" those calculations have been " pressed :"—but it is

* Colden's Vind. p. 82. † Vide Letter to Colden, Append. K.
‡ Colden's Vindication, p. 82.

perhaps necessary that I should answer you as to what testimony the claim set up in favour of Mr. Dod, was supported. And here, Sir, I cannot forbear, in my turn, expressing some surprise that you should put the question ;—nor refrain from observing that your recollection must be singularly defective, if you really suppose the Committee to have framed their statements, and pronounced their opinions, "without any other evidence than Governor Og-"den's assertion."* You know, that they had before them the Patent granted to Dod, with its specification, which was at least *prima facie* evidence of the originality of his improvements ;—you know that they had his own affidavit, denying that he had ever seen the specification of Mr. Fulton ;—you know that his testimony was corroborated upon other points by the affidavit of the carpenter employed by Mr. Ogden to build his Steam boat. And you know, perhaps, that this was competent proof :—at all events, you must remember, that nothing was produced afterwards upon the hearing before the house, to contradict or discredit it.

I shall now revert to that circumstance in the history of this transaction, which seems to have given you the most uneasiness;—which is regarded as the climax of your injuries, and constitutes the *gravamen* of that accusation against the Committee, which you have urged with the most pertinacious, if not with the most discreet and commendable zeal,—their refusal to allow time for Mr. Fulton to be sent for from New-York,—that he might explain to them *the merits of the new and advantageous mode of*

* Colden's Vind. p. 80.

propelling boats by Steam, which Mr. Livingston possessed in 1798 *and abandoned in* 1803; that he might shew *by his own testimony*, that his boats were not in substance the invention of John Fitch; and *demonstrate*, that the improvements on the Steam Engine, by his competitor Daniel Dod, were not important and material, or if so, that they were not original.

Were the minute and circumstantial detail of the proceedings of the Committee, upon which you enter to support your charge of partiality, admitted to be unimpeachable in every particular, it would still be little to the purpose;—but if I have it in my power, Sir, to shew you conclusively, from written documents, that you are mistaken in some of the most important circumstances of your story, I am induced to believe, that even your own confidence in the correctness of statements depending altogether upon the fidelity of your recollection, will be seriously impaired, if not utterly destroyed. The lapse of time has undoubtedly obliterated many subordinate occurrences from my memory as well as from yours; and although, when I last addressed you, I was unable to recal to mind any application whatever to the Committee for delay,—I have satisfied myself, since the appearance of your "Vindication," not only, that you asked for a postponement, but, that my conjecture as to the grounds of its refusal, was correct:—for, suffer me to remind you, that I did not pretend to deny, positively, that such application had been made;—but remarked, that in case it had, "the Committee might have thought it useless and

" improper, to defer the commencement of their in-
" quiries, until Mr. Fulton could be sent for."*

The memorial of Mr. Ogden was presented, as you have truly stated, on the 25th of February; and although you may not have received notice of *the time and place* of the meeting of the Committee, until the day following,—yet, you will not, I am confident, deny, that within a few hours after the Petition was referred, you were apprised of the willingness, of at least one of the Committee, " to recognize you as " representing the interests of Messrs. Livingston " and Fulton." If you " then had no other connec-
" tion with their Steam-Boat concerns, than what " arose from having been employed as their Counsel " in the case of Van Ingen and others,"—still, as a stockholder of the " Fulton Steam-Boat Company," you may well have been considered as having a general interest in the questions to be discussed before the Committee;—in either capacity, however, you were assured of their disposition to hear any thing you might have to offer in opposition to Mr. Ogden. You accordingly attended the Committee, accompanied by Mr. Emmet, as your associate Counsel, and neither of you complained of the shortness of the notice, nor asked for a postponement, until after you had heard the opening speech and the testimony of the Petitioner.—Your own statement shews, Sir, that you did not.†

After the Memorialist had concluded, you, in your turn, " addressed the Committee." It is possible, that you " related the circumstances under which " Mr. Emmet and yourself appeared before them;"

* Letter to Colden, p. 47, 48. † Vide Colden's Vind. p. 63.

and it is extremely probable, that you convinced them "that as to many of the points discussed by "Governor Ogden, you had no knowledge what-"ever." You may, perhaps, have urged the necessity of Mr. Fulton's presence, and alleged the probability of his being in Albany in ten days, in the very terms you have recollected with such wonderful precision. But, surely, Sir, your "whole address to the "Committee was not to reason with them upon this "point?"* The strong impression upon my mind, I must confess, (and the more I reflect and inquire, the more am I confirmed in the accuracy of that impression,) ever was, and ever will be,—that upon the occasion alluded to, you favoured the Committee with your views as to the construction of the several acts, granting and protecting the exclusive right:—that you gave an entire new exposition of these Statutes, and contrasted them with the Patent laws of Congress:—that you referred to and commented at large upon the case in the Court of Errors, and applied it to the case before the Committee, as an authority in point;—in short, that the greater part of your speech was meant as an answer to at least a portion of Mr. Ogden's argument.

Whether your memory or mine be most to be relied on, is, perhaps, not very important to determine, as I am not disposed to question your correctness upon a point, which, I presume, you have considered the most material. I agree, that you "con-"cluded your address with the most earnest en-"treaties, that the Committee would not *make up* "*their Report*, until they had heard Mr. Fulton, as

* Vide Colden's Vindication, p. 63.

"they had done Mr. Ogden."* But I cannot admit, what you leave to be inferred from your statement,—"that the Committee returned no answer whatever "to your solicitations for delay." Here, Sir, your memory seems suddenly to have failed you,—and I regret, that I am obliged to rely principally upon the accuracy of my own, to supply the *hiatus valdé deflendus* of your narrative.

You were told, Sir, in substance, (for I cannot, at this late day, affect to be precise in the recollection of unimportant particulars,) that, notwithstanding the Committee had been willing to hear any thing you might think proper to offer, as the Counsel of those whose interests might be affected be a recommendation in favour of the Memorialist;—yet, that the inquiry before them was strictly an *ex parte* proceeding,—and, that they did not, therefore, feel themselves at liberty to suspend an investigation already commenced,—when no remonstrance against granting the prayer of the Petitioner had been presented to the House, and referred to their consideration;—but that there would be ample time for presenting such remonstrance, as well as for further examination, if that should be thought necessary, before the Committee could make up their Report. In this, all parties seemed to acquiesce, and the inquiry proceeded the next evening,—when Mr. Emmet addressed to the Committee no solicitations for delay, nor "earnest intreaties" to await Mr. Fulton's arrival, however deeply he might have lamented that gentleman's absence;—but, an eloquent,—an ingenious,—an elaborate,—and impassioned speech, in opposi-

* Colden's Vindication, p. 74.

tion to Mr. Ogden's. The assertion, therefore, in my Letter, is literally true, "that you ap-"peared, and acted, and were heard, *night after* "*night*, before the Committee;"—although I owe it to myself, to say, that I should not have expressed myself in such positive terms, had I not believed, when I addressed you, that more time had been occupied in the hearing before the Committee, than now seems to have been the case. But whether the discussion on both sides was concluded on the second evening, or protracted, as I think it was, on the part of Colonel Ogden, to a third,—still, Sir, you were present at every meeting of the Committee, except when they privately consulted upon the measures proper for them to recommend; and you might, at any moment, before they brought up their Report, have obtained a rehearing, had you either requested it of them, or applied for it to the House.

The Report was deferred, until after the expiration of that period, within which you had stated Mr. Fulton might be expected in Albany, and no remonstrance was interposed in his behalf, for two days afterwards;—when that time had elapsed, you then presented, under your own signature, but in the name and behalf of Messrs. Livingston and Fulton, (a form in which you might sooner have addressed the House, had you thought it necessary,) the Memorial, of which a copy is inserted in your Pamphlet.* This document you take the pains to transcribe at length, in order to corroborate your statement;—but, surely there is nothing in it to contradict or invalidate mine? The only exception taken in it

* Colden's Vind. p. 66.

to the Report, is, to use your own words and not those of the Committee, that it "suggests, that the "Laws making the *grants* to Robert R. Livingston "and *Robert Fulton*, were obtained on *false sugges-* "*tions.*" You allege truly, that "this is a fact which "must depend on testimony;"—and you aver, that the Committee, "although *they heard Counsel, had not* "*and could not have heard any testimony* by the claim- "ants on this very important point." This testimony you represent to be in the possession of Mr. Fulton! but without explaining whether any measures had been taken to procure his attendance, at the time you assured the Committee, "he would be immediately sent for," you inform the House, generally, that an express had been despatched for him, and "suppose, that he would be in the city *by the middle* "*of the next week.*" You do not pretend, Sir, in this Memorial, that the Counsel heard by the Committee, had confined themselves to fruitless solicitations for delay, nor complain, that your earnest entreaties for a postponement, had been "rejected;"—but merely pray, that the consideration of the reported Bill might be deferred, "to give time for the arrival "of Mr. Fulton, and that then Counsel might be "heard" in his behalf "at the bar of the house."

Thus, then, although you state in your "Vindication," that you assured the Committee on the 25th of February, that Mr. Fulton would be immediately sent for, and requested a few days delay, until he should arrive in Albany, where he might soon be expected;—although you there allege, that he was a material witness to prove, that Mr. Livingston's principles were as new and as advantageous as he had

represented them to be;—yet, in your Memorial, you admit, that on Thursday the 18th of March, an express had just been sent for him, and that his arrival was not expected until the middle of the next week; and you confess, moreover, that the Committee could not have heard his testimony upon the point in question.—When this remonstrance was read and acted upon in the House,—I was, indeed, present in my place, as you have thought proper, Sir, to remark, and notwithstanding you suggest, that "it would unquestionably have been noticed by me, if it had contained "any misrepresentations;" I did not, I must confess, from its contents, perceive the necessity of paying any other attention to it, than merely to express on the part of the Committee, their perfect acquiescence in granting the indulgence asked for.

Mr. Fulton was accordingly sent for, and attended in company with Mr. John R. Livingston, whose presence, for a reason known to yourself and Mr. Emmet, was also deemed important; and Counsel reanimated by fresh retainers, were heard in opposition to the Report at the Bar of the House; whilst the parties themselves, and their subordinate agents, attempted to gain a hearing *out of it.* I believe, Sir, there were some puppets played off upon both sides, and if my recollection serves me, Mr. Fulton appeared infinitely the more expert at managing the wires. But, neither he nor any other person *was examined as a witness*, and no evidence of any sort was offered in relation to the "new and advantageous "principles of Mr. Livingston," except the affidavit of Stoudinger, by which it most unfortunately appeared, that this plan, consisting of horizontal wheels

below the water, had actually failed. *Models* were exhibited, and arguments used, to prove that Mr. Fulton's Boat differed essentially from Mr. Fitch's, and that Dod's improvements were neither valuable nor original;—but, no *testimony*, Sir, was adduced upon these, or any other of the points in controversy, to impeach the statements or invalidate the opinions of the Committee:—and, permit me once more, Sir, to remind you, that the House sanctioned their Report, and passed a bill which they had recommended for adoption; notwithstanding you wind up your narrative of these proceedings in your "Life of Fulton," with the triumphant exclamation,—"that the Legisla- "ture refused to repeal the prior law, or to pass any "act on the subject!"* Yes, Sir, the first clause of the Bill was eventually rejected in the Senate by a majority of one vote! but as the question was taken immediately after one of the entertainments prepared for the occasion, on board the PARAGON, it was supposed not to have been *properly* understood.—*Constricta jam omnium horum conscientia teneri* CONVIVIA *tua, non vides? Quid proxima, quid superiore nocte egeris; ubi fueris; quos convocaveris; quid consilii ceperis; quem nostrum ignorare, arbitraris?*

But you are still more unlucky in the other circumstance which you adduce, "to remind me of the "earnestness with which the Committee were press- "ed to wait for Mr. Fulton," and to shew the necessity there was for his attendance, a circumstance to which you also refer, "as an evidence of that con- "cealment and want of candour in my references

* Vide Life of Fulton, page 246.

" and quotations, of which I had so frequently and " unreservedly accused you."* I will not now stop to inquire, against which of us this charge may be most easily established;—but shall content myself with this simple observation, that if, on my part, I have practised any concealment whatever, it was from motives very different from those which you ascribe to me;—from motives of forbearance to your deceased friend, of which the influence is at length overpowered by the urgency of self-defence.

I well remember, Sir, that Mr. Ogden produced to the Committee, a volume of Charnock's " History of " Marine Architecture," which he put into my hands, " whilst he read from what he professed to be a copy " of Mr. Fulton's Patent,"† precisely as you have stated it. But in regard to every other material circumstance, which then took place, I owe it to my own character, to declare, that your representation is erroneous and deceptive:—That memory, Sir, upon which you have relied, with such implicit faith, may possibly have deceived you; but it is to be regretted, that you did not repose equal confidence in written documents and public records. These, Sir, would have shewn, that you were mistaken, not only as to the object for which the work of Charnock was introduced, but in regard even to the contents of Mr. Fulton's Patent.

The assertion of Mr. Ogden was, that the principles and definitions inserted by Mr. Fulton in his specification,—and upon which his tables were constructed, and his calculations founded, if not the very tables and calculations themselves, had been trans-

* Vide Colden's Vind. p. 86. † Colden's Vind. p. 68.

cribed from well known works of science. To prove this, Mr. Ogden read in the first place, the following passage from Mr. Fulton's specification. "Having "mentioned the essential component parts of a "Steam-Boat and its mechanism,—its successful "construction and velocity will depend—first, on "an accurate knowledge of her total resistance, "while running 1, 2, 3, 4, 5, or 6 miles an hour, in "still water. Second, on a knowledge of the diame- "ter of the cylinder, strength of the steam, and velo- "city of the piston to overcome the resistance of "a given boat, while running 1, 2, 3, 4, 5, or 6 miles "an hour, in still water. Third, on a knowledge of "the square feet or inches each propeller should "have, and the velocity it should run to drive a given "boat 1, 2, 3, 4, 5, or 6 miles an hour, through the "still water. *It is a knowledge of these proportions and "velocities, which is the most important part of my dis- "coveries on the improvements of Steam-Boats.*"* He then pointed to a passage in Charnock's book, and requested me to pass my eye over it, whilst he continued to read from Mr. Fulton. To exhibit at one view, the *coincidence* and discrepancies between the two authors, I subjoin in opposite array, extracts from their respective productions.

CHARNOCK.	FULTON.
1st. "*By head pressure is meant, "the total pressure which ex- "ists against the head end or "foremost part of a body im- "mersed either wholly or in "part, in any given fluid, when "such body is at rest.*"	"*By head pressure is meant the "total pressure against the "bow, when the boat is at "rest.*"

* Vide Specification annexed to Mr. Fulton's Patent, of 11th February, 1809, Appendix C.

CHARNOCK.	FULTON.
2d. "*By Stern pressure is meant "the total pressure which ex- "ists against the stern end or "hindermost part of a body, "immersed either wholly or in "part in any given fluid, when "such body is at rest.*"	"*By stern pressure is meant the "total pressure against the "stern when the boat is at "rest.*"
3d. "*By plus pressure is meant "the additional pressure which "is sustained by the head end "or foremost part of a body, "moved through a fluid, which "additional pressure is over "and above what is termed the "head pressure, and arises "from the fluid being necessa- "rily displaced, in order to "permit the moving body to "pass through.*"	"*Plus pressure is additional "pressure against the bow, "while the boat moves for- "ward; it is occasioned by the "fluid being displaced, and it "is in addition to head pres- "sure.*"
4th. "*By minus pressure is meant "a subtraction of pressure from "the stern pressure, which sub- "traction is occasioned by the "fluid not pressing so strongly "or impulsorily against the "stern end or hindermost part "of a body, when such body is "in motion through the fluid, "as when the body is at rest.*"	"*Minus pressure is a diminu- "tion of stern pressure, occa- "sioned by the fluid not press- "ing so strongly against the "stern, when the boat moves "forward, as when at rest.*"
5th. "*By friction, (as relating "to the subject,) is meant, that "sort of resistance to a body "moved through a fluid, which "arises either from the adhe- "sion of the particles of the "fluid to the surface of the "moving body, as well as from "the roughness of the body, as "from both those causes uni- "ted.*"	"*Friction arises either from the "adhesion of the particles of "the fluid to the surface of the "body, or from the roughness "of the body, or from both "those causes united.*"

	CHARNOCK.	FULTON.
7th.	*"By head resistance is meant "the minus pressure and the "friction of the water against "the head end united."*	*"Bow resistance is minus pres- "sure and the friction of the "water against the bow uni- "ted."*
8th.	*"By stern resistance is "meant the minus pressure, "and the friction of the water "against the stern end united."*	*"Stern resistance is minus pres- "sure, and the friction of the "water against the stern u- "nited.*

The result of this comparison undoubtedly produced some sensation in the Committee;—whether I smiled at the moment, or not, Sir, I really cannot now remember;—besides the faith due to your assertion, I think it probable, from another circumstance, I did;—for, I recollect, it was observed, that Mr. Fulton, according to the example of Mr. Puff, had treated the definitions from Mr. Charnock as gypsies do stolen children,—"disfigured them to "make them pass for his own."—Then it was, indeed, that you were unable to contain yourself,—you could not then "refrain from interrupting Gover- "nor Ogden," by assuring the Committee, that you "knew, that in the original Patent, Mr. Fulton had "referred to Charnock, as to the source from which "he had derived these *calculations*."—To do away the impression made by this detection, you "pledg- "ed your honour to the Committee, and to the audi- "ence, that you knew, that there was this acknow- "ledgment in Mr. Fulton's Patent, as on file in the "Patent Office," and you now aver, "that when "Mr. Fulton afterwards produced an exemplifica- "tion of his Patent to the House of Assembly, it was "found, that your assertion was correct."*

* Colden's Vind. p. 69. Is it not then somewhat remarkable, that afterwards, in the "Life of Fulton," he should have been re-

When I first saw and read the passages, I have just quoted from your Pamphlet, I could scarcely give credit to the evidence of my senses. I recollected, that Mr. Fulton had, amongst the papers annexed to his Patent, exhibited a table of resistances from Charnock's book, which he acknowledged to have been framed by a Society of Gentlemen in England. I recollected also, that something had been said of an acknowledgment upon one of his drawings, which his Counsel had contended to be sufficient to shew, that he had acted in good faith throughout. But, really, Sir, I never dreamt, that you could have thought the production of that acknowledgment a sufficient redemption of your pledge ;—much less did I suppose it possible, that you could have had the boldness to repeat your former assertions in a sense different from that in which you were understood by the Committee,—and endeavour to evade the charge against your friend of *plagiarism*, by representing it as having been confined to a particular table of *calculations*, which was not before the Committee at all. I rather presumed, that you must have discovered some other evidence amongst his papers to bear out your assertion. I therefore wrote to Washington for authenticated copies of both Mr. Fulton's Patents and Specifications, including every marginal note, reference, or acknowledgment to books and authors, that might be found upon the records, and

presented as engaged in these calculations, immediately upon Mr. Livingston's arrival in France. It is there said, " that Mr. Fulton " then began a course of calculations upon the resistance of water, " the necessary force to move a body through it, upon the most " advantageous form of the body to be moved." *Vide* Life of Fulton, page 152.

obtained in return the exemplifications which will be found in the Appendix.*

At the same time I was informed that the documents thus transmitted, contained every thing that had been deposited in the Patent Office, by way of specification, by Mr. Fulton, except plates and drawings, with their explanatory references. I then requested a special certificate setting forth whatever acknowledgment might be found amongst those plates and drawings, and received in answer a Letter from Dr. Thornton, from which I take the liberty to transcribe those passages which relate particularly to the subject now before us.

"*City of Washington*, 22*d May*, 1818.

"*Sir*,

"*Mr. Elliot, of my office, received from you "Letter of the* 13*th instant, in which you request my cer- "tificate relative to Mr. Fulton's original specification for "Steam boats, as his friends have stated that he has ac- "knowledged, in marginal notes, his obligations to Char- "nock.*

"*I have examined Mr. Fulton's specification, which "consists of about four pages, on which the patent was issu- "ed. The explanatory references to his drawings and "plates, consist of about eighteen pages, and I am of "opinion that he must have copied about fifteen pages of "the eighteen out of* CHARNOCK, *or some other work, "as the calculations are all made in nautical instead of "geographical miles—when there are only sixty nautical "miles to a degree, and sixty-nine and an half geographical "miles:—So that a nautical mile is nearly* $\frac{19}{120}$, *or nearly* $\frac{1}{6}$ *"part more than a geographical mile; and though he ex- "pressly states in his specification that he calculated his*

* Vide Appendix C and D.

" *boat to draw only two feet of water, he rests all his cal-*
" *culations on a small table of Charnock's, which is cal-*
" *culated on the resistance of the water six feet deep, and*
" *consequently these alterations are every one wrong, both*
" *as to distance and resistance; yet he no where mentions*
" *Charnock, and makes no acknowledgment in his eigh-*
" *teen pages; and only makes a statement at the bottom*
" *of one of his drawings, which contains a small table in*
" *the following words:*—' A table of the resistance of
" ' bodies moved through water, taken from experi-
" ' ments made in England, by a Society for improv-
" ' ing Nautical Architecture, between the years 1793
" ' and 1798.' *He has likewise so servilely copied the*
" *calculations in the small table alluded to, that the resist-*
" *ances are calculated only on angles of* 60 *degrees, or* 20°
" *—and as this might be a geometrical or arithmetical*
" *series, he ought to have given another term, to have dis-*
" *covered the law of the progression, which he has entirely*
" *omitted, and therefore what he has copied is, in this case,*
" *useless.*

" *I find a stress has been laid on another note in his*
" *description, which is insinuated to contain an admission*
" *of his having borrowed some calculations and observa-*
" *tions from others; but this note, I certify, is only in pen-*
" *cil, written by myself, when directing what was to be ad-*
" *mitted in a copy that was solicited, of all that was neces-*
" *sary in Fulton's patent and description, a copy of which*
" *I subjoin.*

" *I am, with the highest respect,*
" *And consideration, yours, &c.*
" WILLIAM THORNTON.*

" W. A. Duer, Esq.

* Well known as the Superintendant in the Patent-Office, ever since its establishment under Mr. Jefferson.

" NOTE"—*(written at the description of Drawing 5th)*
" *The preceding drawings being taken from books, and*
" *only considered as containing introductory principles, are*
" *omitted in this copy.*"

Allow me now, Mr. Colden, to ask you, as a gentleman, whether you consider your plighted honour saved by your explanation. Are you content to

> " Keep the word of promise to the ear
> " And break it to the hope ?"———

Where, Sir, " is the irrefragable proof produced " by Mr. Fulton," to redeem your pledge ? Did you intend to supply the want of that proof, by awakening the sympathies of the public in your favour, and directing its indignation against me, by your allusion to the " orphan infants" of your deceased friend ?

Disciplined, as I have been, in the school of adversity, and bereft at an early age of the superintending vigilance of a father's eye, I know too well the evils to which an orphan is exposed, not to commiserate the situation of Mr. Fulton's children. And if any act or word of mine has borne upon their prosperity or comfort, I shall lament it to the latest hour of my life.—I may regret it too, as deeply as those who deal more largely in professions of sensibility, but in the very article of Death, my conscience will acquit me of injustice towards them, or enmity to their Parent. With unfeigned reluctance was I forced to revert to a circumstance which you, Sir, as the eulogist of Mr. Fulton, should have permitted to pass into oblivion. But as your injustice

extorted the exposure from me, your character must sustain the reproach, and your conscience, the burden of the deed.

It could hardly be expected that I should sit down under the imputation of "want of candour and fair-"ness, in respect to a man who is not now here to "vindicate himself;"* or suffer myself to be overborne by the contumelious aspersions and bold contradictions of one whom he left behind him, feed, and interested to "espouse his cause," without one effectual struggle to repel the injury. On such an occasion, the proverb to which the partiality of friendship so frequently has recourse, may surely be amended, and he, who in defence of his character, is driven to speak of the departed, be privileged to read "*De mortuis, nil nisi*——VERUM."

To me, I must confess, there appears something absurd and mean, if not ridiculous, in these repeated efforts to render the public gratitude to Mr. Fulton, and the public sympathy for his children, subservient to the selfish interests of those who have fastened upon his spoils. The share which he possessed of the monopoly, after deducting that portion with which he bought off the hostility of some of the present proprietors, was reduced to three-tenths of the whole. In what manner, or to what extent, that share was secured to his children, I do not know; but their portion of the property would certainly be in no greater jeopardy, by a judicial investigation of its title, than those of the Messrs. Livingston, or of Mr. Bloodgood, of the Messrs. Townsends, or of Mr. Emmett, of Mr. James, or Mr. Jenkins, of Mr.

* Colden's Vind. p. 71.

Justice Spencer, or yourself,—and I am yet to learn that should that title fail, the children of Mr. Fulton would be so destitute as you represent. They are connected by blood with one of the wealthiest families in the state, and they have, for their protectors, some of the most able and powerful of the political leaders of all parties. Men of the most discordant sentiments and contradictory opinions, have united in a common bond of interest. The jarring elements of past contentions have united in harmonious concord. The very Antipodes have met for their defence.

> " Alterius Sic
> " Altera poscit opem res et conjurat amice."

What, therefore, can these " orphan infants" fear from my attacks, whilst they have *Governor Ogden*, for their TRUSTEE, and you, Sir, for their ADVOCATE.

I have now finished my examination of that portion of your argument which involved a consideration of the suggestions upon which the act of 1798 was founded; and, I trust, I have shewn,—first, That Mr. Livingston did actually represent to the Legislature, that he was then the possessor of a new and advantageous mode of propelling boats by means of Steam, and that in consequence of this representation, he obtained his grant, to enable him at once to reap the reward of his ingenuity or perseverance, and to secure an immediate benefit to the public; and not to encourage him to pursue a course of experiments to prove his title to that reward. Secondly.—That neither that suggestion nor his representation in regard to Fitch's prior experiments,

were true in point of fact, inasmuch as in the one case Mr. Livingston had never been able to comply with that condition of his grant which rendered it obligatory upon him to prove the practical utility of his principles by the successful performance of his boat; and as, in the other case, Fitch had actually executed his plan for a Steam boat, and obtained a Patent therefor as for an invention, the same in substance as that subsequently claimed by Mr. Fulton.

In the course of this examination I have been led incidentally, to shew that Mr. Ogden's Steam boat was constructed upon principles invented by Fitch; and I hope, Sir, that in performing this part of the task prescribed to me, I have vindicated the Committee from your imputations of partiality and precipitancy; that I have exposed the injustice and futility of your complaints against them for rejecting your application for delay, and have proved that the circumstances to which you have appealed in confirmation of your statements, have either been misconceived or misrepresented. It yet remains, in order to close the argument on this branch of the subject, to follow you in your enquiry, "How far, admitting that the suggestions upon which the act of 1798 was passed, were not *true in fact*, the claims of the Patentee, his associates and representatives, under subsequent laws, ought to be affected?"

I thought that I had stated so explicitly my reason for recapitulating in my Letter, the arguments of Colonel Ogden, upon the general construction of these acts, and had defined so clearly the extent to which I admitted those arguments to be conclusive, that there could be no room for misapprehension or doubt. I undertook to prove, that the repeal of the

Statutes, giving the forfeiture, and other cumulative remedies to Messrs. Livingston and Fulton, would be consistent with the Public faith ;—and I observed, by way of preface to my argument on that point, that it " resulted conclusively from the reason- " ing of Mr. Ogden, that the act of March, 1798, is " the foundation of the exclusive title at present pos- " sessed by the representatives of Messrs. Livingston " and Fulton."

Having, as I supposed, successfully supported this position, I next endeavoured to shew, that " as the " act last mentioned gives no particular species of " remedy, but had left the party to seek his redress " for injury at Common Law,—it was clear from the " admissions of the Counsel and the opinions of the " Judges, in the case decided by the Court of Er- " rors, that neither the forfeiture given by the act of " April, 1808, nor the provisions to enforce it, con- " tained in that of 1811, formed any part of the *right* " vested in Messrs. Livingston and Fulton, but were " mere additional *remedies* given for its protection :"* And hence I inferred, that *these particular acts*, or rather, the forfeitures and penalties created by them, might be abrogated by the Legislature, without interfering with any vested right, and without violating the faith of the State. But, whatever may have been affirmed in argument by Mr. Ogden, I never contended, Sir, " that if the law of 1798 were passed " on unfounded suggestions, *then the subsequent laws or* " *any of them* might be repealed, consistently with the " faith, honour and justice of the State."† I neither

* Vide Letter to Colden, page 67-70.

† Colden's Vindication, page 83.

thought that the rights of Messrs. Livingston and Fulton rested entirely on the act of 1798, nor supposed, that if that act were passed in consequence of mistake or misrepresentation, there could be no just claim under the subsequent acts; though I certainly did say, and still do maintain, that all the acts being *pari materie*, must be construed together; and that, therefore, no *new title* was conferred by the laws posterior to the act of 1798;*—that is, no other or different sort of title, than that previously vested in Mr. Livingston, was derived from any of the subsequent Statutes, nor any right acquired by the subsequent grantees, exempt from obligations and consequences, or discharged from conditions similar to those implied or expressed in the original act from which the whole had sprung.

You are pleased to declare, Sir, that you have sufficient confidence in my honour, integrity, and common sense, to be willing to ask me,—"whether I "do not believe, that the Legislature which passed "the acts subsequent to the act of 1798, intended, "that the subsequent acts should have precisely the "same operation as if this brief mode of legislation "had not been adopted, and the enacting clauses of "the act of 1798 had been copied into them."† *Believe* it, Sir?—It is exactly that for which I am contending, and I hope the confidence which prompted you to put the question, will not be weakened by my answer. I do verily "believe", that the acts of 1803 and of 1807, as well as that of 1799, are not only to be understood precisely as if the Legislature had incor-

* *Vide* Letter to Colden, pp. 67,-69.

† Colden's Vind. p. 94.

porated into them " the *enacting clauses* of the act of " 1793;" but as if it had also prefixed to each of them in succession, the *original preamble*, reciting *mutatis mutandis*, the motives and inducements to the grant. Not, Sir, that I mean to contend, that the validity of the claim under these laws, now depends upon the truth of the suggestions upon which Mr. Fitch was divested of his rights, but upon the fact of Messrs. Livingston and Fulton's being possessed in 1807, of such a mode of propelling vessels by means of Steam, as that of which the former of those gentlemen had represented himself to have been the " possessor" in 1798, viz: of a " *new*" as well as an " advantageous" mode.

It will be recollected, that all the laws in relation to the monopoly, from 1798 down to 1808, were passed after the expiration of respective periods, previously limited in each of them successively, for the performance of that condition upon which the title was from the beginning to have vested; and although the several terms for such performance, as well as the duration of the grant itself, were from time to time enlarged; yet, on no occasion were any other rights vested in Mr. Livingston and his different associates, than the identical privileges which had in the first instance been wrested from Mr. Fitch. Each of these successive Statutes refer either mediately or immediately to the act of 1798, as that does to Fitch's law, for the explanation and description of the subject matter of the grant, and whatsoever may be the variance or peculiarity of their phraseology, they all operate expressly or by direct implication to revive the original act in favour of successive sets

of grantees, and prolong the several periods within which they were to enjoy, in conjunction with Mr. Livingston, that exclusive right which had been at first transferred to Mr. Livingston alone. The act of 1799, *continues it in force*,—that of 1803, *extends* "the rights, privileges, and advantages, granted by "it to Robert R. Livingston and Robert Fulton, for "the term of twenty years, provided the condition "contained in it were performed in two years;" and the act of 1807, which professes merely to *extend* the preceding act "for the term of two years, to exhibit "the proofs therein required," still leaves the term of the grant itself to be computed from 1803, and in effect *revives* the act of that year, and revives with it, the act of 1798.

Due proof of compliance with the condition prescribed by the last mentioned act, and by that alone, having been adduced within this extended period; the original title under it was perfected, and the same exclusive right became thereupon vested conjointly in Messrs. Livingston and Fulton, which would have vested solely in Mr. Livingston, had the former law only been revived, or the requisite proof afforded, before the expiration of the original term prescribed in it. The grant then in 1807, was renewed upon the same suggestions, and taken subject to the same conditions as at first. The law immediately preceding it, merely admitted a new party to participate in its privileges, and as the continuance of those privileges for a longer period, was, in fact, all that was effected by this renewal,—the original act of March, 1798, with these modifications, is to all legal intents and purposes actually in force.

But the effect of "this brief mode of Legislation," must have been precisely the same upon the preamble as upon any other portion of the revived Statute. The whole was revived, with such necessary alterations as arose from its embracing Mr. Fulton in its provisions, and the deferred period at which it took effect. As the same suggestions, therefore, which had enabled Mr. Livingston to obtain the original grant, were thus repeated by the associate Petitioners, for its revival and extension, the same motives which influenced the Legislature in the one case, must have operated equally in the other, and the validity of the existing title must consequently depend upon the truth of those suggestions;—not, indeed, with reference to the time the act passed, nor in relation to the individual named in it,—but, with reference to the period of its last revival, and in relation to the parties for whose benefit it was thence forward to inure.

Now as the most material of the suggestions which influenced the Legislature in 1798, to invest Mr. Livingston with the exclusive right, was, that the principles then known to him were new and advantageous, it follows, if my reasoning be correct, that upon the revival of that grant in 1807, the Legislature were induced to confer the same privileges upon Messrs. Livingston and Fulton, by a representation from those gentlemen, that they were "*the* possessors "of a mode of propelling boats by means of steam, "upon new and advantageous principles." The original title never having vested, as we have seen, in Mr. Livingston, from his inability to comply with that condition, by which the truth of his representa-

tion in regard to the practical advantages of his plan was brought to a certain test, all inquiry respecting the *novelty* of his principles became immaterial, and every question relating to the suggestion upon which he obtained the repeal of Fitch's grant, became obsolete at the expiration of the period for which that grant would have otherwise endured.

The inquiry, now relates to the truth of the suggestions made by Livingston and Fulton, when they procured the renewed grant of those privileges which are still enjoyed by their representatives; and it would be equally illiberal and absurd to deny, that the principles known to those gentlemen in 1807, were *advantageous*, when in practice they have far exceeded the requisites of the Law,—the hopes of the public,—and their own expectations. The only remaining question, therefore, which on this ground can affect the validity of their grant, is, whether those principles were "*new*,"—or in other words, whether the grantees under the act of 1807, were "*possessors*" of a mode of propelling boats by means of Steam, upon principles *then known to them, different from those of Fitch, or any other preceding Inventor?* But I have already shewn, that the boats built by Messrs. Livingston and Fulton, were in substance the invention of John Fitch, and that the particular improvements claimed as the property of Mr. Fulton, whether of the substance of the discovery or not, were known and used by others, anterior to his own earliest experiments and prior to the existence even of the first monopolizing grant to his coadjutor and patron.

You must now feel, Sir, that you might have spared your declamation, and reserved your wit as

well as your indignation, respecting the injustice of depriving the representatives of Mr. Fulton of their rights, in consequence of the mistake or misinformation by which Mr. Livingston was betrayed into his erroneous statements to the Legislature in 1798. It certainly would have been more candid to have stated the true question, for the consideration of your readers,—and perhaps, more important to have convinced them, that the same representations had not been repeated by Mr. Fulton himself, at the time he became interested in the grant. Instead of this, you argue from the recitals of the act of 1799, that the Legislature must have known, that Mr. Livingston had *never professed* to be the possessor of a "new and advantageous" mode of applying Steam to navigation, because he had not been able to afford proof of his having actually built a packet boat of twenty tons burthen, and of his propelling her at the rate of four miles an hour.

Now, all that they "must then have known," from those recitals, was, that he had failed in the performance of that condition, which was established as the test of his professions;—and if his professions had not unfortunately preceded his experiment, the Legislature might never have known, that he had failed in those also. But as he couples this acknowledgment of failure with an expression of his hope of ultimate success, you are perfectly satisfied, that the State intended nothing else, when in 1799, it extended the period for exhibiting his proof, than to engage him in a course of experiments to prove the truth of his original suggestions;* and you then endeavour, to give to the act of 1803, a construc-

* Vide Colden's Vindication, p. 89.

tion equally favourable to the objects of your argument, and equally repugnant to sound reasoning, legal principles, and common sense.

In disdain of technical rules you seek to discover the intentions of the Legislature, not by the natural and probable signs usually resorted to on similar occasions, but by family traditions of lobby representations to individual members of both houses, founded upon private communications, which the friends of Mr. Livingston received from him, whilst he and Mr. Fulton, were prosecuting their experiments in France.

To the reasoning, if such, from courtesy, it may be called, by which you attempt to support your new construction of these two statutes, it can hardly be expected that I should reply. The answer to the argument drawn from the preamble of the first, has indeed been anticipated in the course of my remarks on the act of the preceding year; and certainly, Sir, to use your own language, "I shall not think "it worth while to repeat the answers that have "been so often given to this miserable sophistry."* But as to your construction of the second, "it is in- "deed an extraordinary instance," (to adopt your words again, as I have none so apposite in my own vocabulary,) "to shew how far passion and preju- "dice can pervert the human understanding."* And, let me add, Sir, that however ingenious and zealous the advocate who has resorted to such arguments, however low in station, or in intellect, the "Magis- "trate" whom they may have been designed "to "influence," they must be derogatory to the reputa-

* Vide Colden's Vindication, p. 97.

tion of the one, and "an insult to the understanding" of the other.*

From your slight and obscure allusion to the act of 1807, and the general cast of your observations upon the act of 1808, you meant it seems that it should be inferred that the present title became vested rather under the latter than the former of those laws. You certainly ascribe to the act passed in 1808, much greater virtues than it will be found to possess. But whether your notions of the peculiar importance of this law be derived from the circumstance of the first Steam boat "having frequently been at this "city before it was enacted," and the consequent probability, that "most of the Members of the Le- "gislature knew exactly what she was, and were fa- "miliar with the history of those events which had "led to her establishment:"†—Or, whether your opinion is not rather founded upon the introduction of the word "*contract*," into that Statute, is a matter of greater difficulty than importance to determine.‡

* Colden's Vindication, p. 93, 94. † Ibid. p. 96.

‡ The idea of a "*Contract*," signed, sealed, and delivered, between the People of the State of New-York, or their Representatives, on the one part, and Messrs. Robert R. Livingston and Robert Fulton, on the other, was not, I believe, adopted by any of the Judges who delivered opinions in the case of *Livingston* vs. *Van Ingen;* but it was considered, both by Mr. Henry and Mr. Wells, in their arguments as counsel for the Respondents, "to be a doctrine too absurd to be sanctioned by a court of jus- "tice." It was urged on that occasion, "that the grant want- "ed all the essential features of a contract, inasmuch as it "was gratuitous—without reciprocity or mutual obligation, "and as there was no mode provided by which the State could "compel performance,"—in short, that it was "a mere permis- "sion, and the *foisting* of the word *contract*, into the last act, "could not alter the nature of the grant." 9 *Johns. Rep.* 541.

It appears simply from the Statute itself, that in 1808, the Legislature declared that Messrs. Livingston and Fulton should be entitled to five years prolongation *of their grant or contract* with the State, for each boat which they should establish, in addition to that then in operation, "Provided the whole "term of their exclusive privilege should not exceed "thirty years."* This, Sir, you have given as the substance of the first section of the law, and, what is really remarkable, you have given it almost correctly. There is one trifling omission, however, which it may be as well to supply; and that is, that the thirty years to which the whole term of the grant appears to have been *limited* by the proviso to this clause, is computed "*from the time of the passing of* "*the act*" of 1808, instead of from the year 1803, from which the previous term commenced,—thus, in fact extending the duration of the whole grant for five years, without any pretence of *consideration!* A circumstance, which I will venture to say, was as little understood at the time, by those who were not in the secret, as the design with which the word contract was "*foisted*" into the act.

After giving this extract from the Statute, in the manner most convenient for your purpose, you ask whether it is not a recognition of the right of Messrs. Livingston and Fulton? Whether it is not a grant to them? And pretend to be answered, by anticipation, in the negative; because it had been alleged that it did not, "*per se*" give the right:—and because this, and the act of 1798, had been stated to have been passed "*in pari materie.*" But when, and from

* Colden's Vindication, p. 97.

whom, did you receive that answer? Never, Sir, from me, and I suspect that neither Mr. Ogden or any other individual, who has ever engaged upon one or both sides of this controversy, will ever interfere with your peculiar claims to a conception of such palpable *originality*.

The act of 1808 was, indeed, a recognition of that right, which had previously become vested in Messrs. Livingston and Fulton, under preceding statutes. But instead of an original grant to, *or contract with* them, it was a mere enlargement of the term for which a prior subsisting grant was to endure, and an alteration of the period from which it was to commence. It was not to take effect absolutely, but conditionally, whenever they should establish one or more additional boats, and unless they had actually established at least one other besides the boat then in operation, the extension of their grant would not have taken effect at all, and the right would have continued to rest on the prior laws.

It does not of itself convey a distinct title, but must of necessity be understood with reference to, and in connection with, those anterior Statutes;—and although I have contended that these being all *pari materie*, are, according to the most familiar rules of interpretation, to be construed together, yet I have never affirmed, nor believed, that it was necessary to inquire whether the act passed in 1798, in favour of Mr. Livingston, was not passed in consequence of some information or mistake, in order to determine the validity of those subsequent laws, in which Mr. Fulton had as deep an interest as Mr. Livingston.*

* Vide Colden's Vindication, p. 97.]

I have maintained, however, that the exclusive right, as now enjoyed, depends on the existence of the act of 1807; for it was by the immediate effect and operation of that law, that the former statutes were revived, and the title originally created by them, at length consummated. I think I have also demonstrated that the validity of that title, so far as the point under discussion is concerned, depends on the truth of the suggestion by which the Legislature was then induced to revive the extended grant for the joint benefit of Messrs. Livingston and Fulton: and I am confident I have shewn that neither those suggestions, nor the representations by which Mr. Livingston procured the transfer of Fitch's privileges to himself, were "true in fact," inasmuch as in the one case, the "principles" of Mr. Livingston, whether "new" or not, were not "*advantageous*," and as in the other, the "principles" possessed by Messrs. Livingston and Fulton, although "advantageous," beyond hope or promise, were certainly not "*new*."

IV. I now proceed with you to examine "the Constitutional question," or, to state it more distinctly, to enquire, whether *This State, after acceding to the Federal Constitution, had power to grant exclusive privileges of the nature vested in Messrs. Livingston and Fulton; or, if it had, whether such grant must not give place to rights acquired under the constitutional Laws of the United States.* And if, Sir, in my former argument on this question, I have "appeared to disdain any adventitious aid," I must plead, as my apology, the nature of the subject, and the precept of the Orator,—"*Non enim tam* AUCTORITATIS *in disputando quam ra-*

"*tionis quærenda sunt.*" I was aware that the discussion of this controverted point required a much greater degree of "professional skill" than I had it in my power to "display," and if I sometimes ventured to "rely on the resources of my own mind,"* you ought not in reason to complain, as you have remained unseduced by my example, and in contempt, probably, of "classical" advice, have "disdained" to support your side of the argument by any thing but "authority."

The vindication of my own conduct, and that of my colleagues, was the motive of my original address. The incidental discussion of the other questions to which it led, involved nothing in which much aid was to be gained, on my part, from authority; and the occasion was unfit for the display of learning of any kind. I thought that the controversy afforded scope for general arguments, on the policy of a particular article of the Constitution, and the probable intentions of the framers of that instrument. I think so still. But I must confess that those arguments do not present a very fair opening for pathetic or inflammatory declamation. It is difficult to press into the service of a purely rational investigation, matters utterly irrelevant to the question. The "children of Mr. Fulton," cannot be brought forward with propriety, to illuminate the darker sides of the controversy;—nor the "*viginti annorum stipendia*," adduced to soften the more indurated, or blunt the sharper points of an adversary's arguments. The shade of the late Chancellor cannot be invoked:—

"Id cinerem, aut manes credes curare sepultos?"——

* Colden's Vindication, p. 98.

The disavowed imputation upon his veracity, can neither serve as an illustration, nor act as a stimulant to indignant feeling:—Even the honest sympathies of "Mr. Jacob Barker,"* and the learning of Professor Mitchill, are, for the purposes of this dispute, insignificant and useless.†

These, Sir, are topics on which you may securely draw, and seriously employ, whilst humbler men must win their way to attention, by the labour of clear statement and correct reasoning. But you, Sir, seated in the easy-chair of public authority, may, with unbridled insolence of contempt, and indifference of censure, intemperately declaim, when you should gravely argue; disturb the ashes of the

* Vide Colden's Vind. p. 148.

† I am accused, (*Cold. Vind. p.* 84,) of having assailed the latter of these worthy gentlemen, "with *anger*, and an attempt at irony, for "no other reason than his having advocated the Chancellor's first "application to the Legislature for an exclusive grant." Although it is utterly impossible for me to have felt the least symptom of irritation against the learned author of the "Case of Rachel Ba-"ker," I had a right to hold him responsible as chairman of the committee appointed by the "Literary and Philosophical Society," to superintend the publication of the "Life of Fulton," for the attack contained in that production upon the Report of the Committee of the Assembly on Mr. Ogden's Memorial. I am also accused of manifesting dissatisfaction at the respectful mention of the Chancellor's brother-in-law, General Lewis. But if there be any thing ridiculous in connecting that gentleman's name with the subject of "Torpedo warfare," it is his "friend," Mr. Colden, who is to blame, and not I. At all events, my allusion cannot surely be deemed a severe retort for the observations which Mr. Lewis made in his place in the Senate of this State, upon the Report of the Committee. I have long since, however, ceased to feel the least emotion of resentment against him for his speech on that occasion; for notwithstanding the grounds afforded me for personal complaint, I know him to be, in the main, a liberal man.

dead to inflame the passions of the living; solicit the pity of the community in favour of your private bargain, from a whining exposure of the extent of your probable loss; instead of manfully appealing to their reason to uphold you in your rights: and, finally, strive to identify the kindlier feelings due to the misfortunes of the orphan, with the unaffecting interests of a greedy speculator. These are logical and rhetorical privileges which are, perhaps, intimately connected with that contempt of letters on which you seem so much to pride yourself. They are privileges of which I am content you should avail yourself, if, in pursuing the consideration of this "Constitutional question," I am allowed to persevere in that mode of treating it, which has given you so much offence.

It was attempted, in my former Letter, to be shewn that the grant by the individual States to Congress, of the power "to promote the progress of science "and the useful arts, by securing, for limited times, to "authors and inventors the exclusive right to their "respective writings and discoveries," was the grant of an *exclusive power*. The nature of the subject was briefly explained; but the origin and nature of the property meant to be regulated, and the general policy of this article of the Constitution, were not fully developed. I shall endeavour, therefore, to supply that omission.

A right of exclusive enjoyment in things, both real and personal, corporeal and incorporeal, is the very foundation of the idea of *Property*. It is the creature of civil society, and one of the strongest ligaments by which the body politic is knit together. To give full efficacy to this powerful principle, a

right of transmission was gradually superadded, by which an ancestor handed down to posterity the acquisitions of his industry and talents. Previously, then, to any positive law affecting the subject, it is difficult to conceive a process of reasoning, founded on strict legal principles, by which the right of exclusive enjoyment, and the right of transmission, could be denied to any modification of property. The moment any thing was acknowledged as *property*, from that moment it would have seemed to follow that the great principles common to all property, must apply to it; and, therefore, an acknowledgment that the fruits of an Author's genius were subjects of propriety, induced, as a necessary consequence, both the right of exclusive enjoyment, and the power of transmission.

But both the premises and the conclusion were denied by certain English jurists, and denied, as is abundantly evident, from a complete misconception of the principles upon which the right of property is founded. A STATE OF NATURE had been opposed, by the learning of preceding ages, to a STATE OF SOCIETY, and certain rights, supposed to be derived from the one, were considered as original principles, variously modified by the other. But I believe most sound Lawyers, as well as most sober Metaphysicians, have renounced all faith in that ancient speculation; and regard the "State of Nature," as one in which the genius and talents of mankind would be for ever useless and unprofitable. As society is an indispensable requisite of human improvement, it is to the "SOCIAL STATE," that we ought to look for the original of all our rights; and amongst

others, of the RIGHT OF PROPERTY :—and if it be not extraordinary that they who looked to a visionary state from which to derive their principles, should have been led into error,—it is strange, indeed, that they who rested the right to property on the slender basis of bodily labour, or the slighter foundation of occupancy, should have rejected the more intelligible title of invention or discovery.

The claims of inventors and authors are so congenial to our notions of natural justice; they fall in so easily, and accord so harmoniously with all the ideas we derive from the ultimate objects of Society, in establishing the right of Property, that some ill founded principle, some imagined ill consequence, or some inveterate prejudice, must have prevented the full admission of this right, arising as it does, from individual merit, and springing into existence at the command of individual power.

Two causes may be enumerated, as having concurred to produce this erroneous opinion. First—A misconception of the grounds on which the right of Property ultimately rests; and, secondly, the inconvenient consequences supposed to result from the admission of the principle in its particular application to the productions of the mind. The former was rather the avowed, whilst the latter was, perhaps, the secret cause of the opinions held by some of the Judges, in the great case of *Miller* vs. *Taylor*.* It was evident that if an inventor or author had a right to his discoveries or writings, and that right was exclusive and transmissible, *ad infinitum*, to their

* 4 Burr. 2303.

legal representatives, a formidable barrier would be opposed to the progress both of art and science. It was foreseen that as each successive heir or representative, would be interested to draw as great pecuniary gains as possible from the work or invention of his ancestor, a TAX, indefinite in duration and amount, might be levied on posterity, and the free advancement of Science and the Arts proportionably impeded.

The effects which such consequences would produce, were perceived and deprecated. In the Republic of Letters, the widest range of diffusion, and an uninterrupted circulation, were alike indispensable to the expectations of Philosophy, and the wishes of Benevolence. In the useful arts, experience was daily opening an interminable field to future discovery. Chemistry was just emerging from the darkness which had so long concealed her powers; and the condition of the world was undergoing a sensible change from the new impulse which had been given to all the powers of human invention. Improvement had hitherto been unrestrained, and Letters and the Arts had been, as yet, transmitted from age to age, without any other exaction than the tribute which Fame pays to the memory of Genius.

The result of admitting an exclusive and perpetual right of Property, in the fruits of intellectual labour, was not, and could not, be fully known or estimated; but that it would operate as a clog to the advancement of knowledge, and powerfully retard the progress of society, was clear to demonstration. Yet to deny to inventors the fair profits derivable from their talents and exertions, was, of itself, at va-

riance with every idea of natural justice, and every dictate of liberal policy. It was, in effect, to deny to Genius its appropriate reward, and to withhold, from the powers of intellect, one of the strongest stimulants to their activity. From a balanced consideration, therefore, of both sides of this important question, a compromise was at length effected, by which the claims of the inventor were acknowledged, his rights protected, and his reward secured ;—whilst a public interest was effectually created, and an immunity, from too great a burden, erected for Posterity.

From this rapid sketch may be collected both the origin and policy of the Act of the British Parliament limiting the rights of authors and inventors in their writings and discoveries to a term of years. With a full knowledge of that Statute and of the principles and policy on which it was founded, the several States ceded to Congress a power to promote the progress of science and the useful arts, by securing to authors and inventors the exclusive right to their writings and discoveries. The English Law limited the right as we have seen *to a term of years.* The power ceded by our Constitution was to secure it for "*limited times.*" The former restricting the right by a definite term,—the latter adopting the same principle and pointing to the same object, but leaving the *quantum* of interest to the discretion of the National Legislature.

Thus, then, it is manifest, that in conformity to the policy of the British Statute, the power in question was vested in Congress, with the same means and for a similar end. The *ultimate object* of the

power, was the advancement of science and the useful arts. The *means* by which Congress were to effect that end, was, by securing to inventors the right of property in their works, *for limited periods*, and the *result* has been a transfer to the public of a reversionary interest in those productions, which of common right had belonged exclusively to their authors. This result, and the limitation which produces it, concur in promoting the general end contemplated by the Constitution;—the one by giving to men of genius the excitement of a secured property in their writings and discoveries,—and the other by extending (after the expiration of the term limited,) a free use of the effective product of inventions to THE WHOLE COMMUNITY.

The general end of the power and the profitable result to the Public in the reversionary interest, being thus equally apparent, I think it not less obviously the meaning of the Constitution, that Congress should "secure the exclusive right of authors and "inventors to their respective writings and discoveries," by the exercise of *an exclusive power of Legislation*:—for, in a confederacy consisting of many independent sovereignties, that object *can only* be secured by vesting such exclusive power in a *paramount authority*,—and the necessity of such a power to the attainment of the end, was an adequate reason for vesting it in the Supreme Legislature of the Union.

I attempted in my former Letter to prove, from a critical examination of the *mere words* of the article of the Constitution, that the power which it vested

in Congress was *exclusive*. The view now given of the origin and policy of that article, whilst it explains more fully the principles which must have influenced the framers of our National Compact, appears to me abundantly to confirm the reasoning which first led me to my conclusion. If that conclusion and the principles here stated be admitted, (and you have alleged nothing as yet to overturn them,) it will easily be seen, that the grant of exclusive privileges by one State, of that which may within the intent of the power vested in Congress be *patented*, is voidable, as affecting other interests besides those of the Patentees,—interests equally intended to be secured under the power granted by the several States to the Government of the Union. That the grant to Messrs. Livingston and Fulton, is a grant of exclusive privileges, in what may be the subject of a Patent, has never been denied, and I have, therefore, contended,—THAT IT IS A GRANT IN VIOLATION OF A RIGHT SOLEMNLY RESERVED TO EVERY CITIZEN OF THE UNITED STATES, BY THE FEDERAL CONSTITUTION.

I confess, Sir, that it is difficult to bring the full force of this argument home to the understandings of men whose feelings control, or whose interests pervert, their reason. The right of each Citizen to the enjoyment of future discoveries and improvements in Science and the Arts,—the benefits he may personally derive from it,—concerns so many, and concerns them so remotely, that it is scarcely known as an actual advantage;—nor is its privation felt or apprehended as a sensible and real loss. The disturbance of it affects the interests of no particular combination of individuals; it can only be perceived

by its operation upon future prosperity;—and to trace that downwards to individual comfort, ease, and opulence, is not only a matter of some difficulty, but even if it were done with strength and clearness, it would not agitate the great mass of men, intent upon the pursuit of nearer objects, with any powerful emotion. To the eye of genuine and intelligent philanthropy, it is nevertheless, an interest of great magnitude,—and in proportion as its effects are remote and less likely to enlist the passions in its favour, does it need all the aids that a firm unshrinking reason can afford it.

In alluding to my former arguments upon this topic, you admit, Sir, in your pamphlet, that my "view of a part of this subject is perfectly correct." You observe, "that previously to the adoption of the "Constitution, it had been a question, whether au- "thors and inventors could have any natural or com- "mon law right of property in the fruits of mental "labours, and if they had," you affirm, "*there was not* "*any mode by which that right could be ascertained and* "*secured to them.*"* But from the loose expressions and confused reasoning which follows, it is difficult to extract from your work, a consistent interpretation of the article of the Constitution now under consideration. At one time you affirm, that "it does not "authorize Congress to give or convey a right or "title to authors or inventors;"†—at another, you speak of the title which Congress may confer "in "virtue of it;"‡—and, although you had previously

* Colden's Vindication, p. 108, 109.

† Ibid. p. 109.

‡ Ibid. p. 110.

remarked, that "the framers of the Constitution set-
"tled the question of an author's right of exclusive
"enjoyment;"*—yet, in virtue of what authority they resolved the doubt, or what was their mode of solution, you no where inform us,—and here as elsewhere, I am perplexed by the ambiguity of language to which I have in vain endeavoured to give a consistent meaning.

According to the uniform opinion, which I have held, this right of exclusive enjoyment, though it had been denied in England, was an existing one when the Constitution was adopted. The framers of that instrument being called together, for the purpose of defining the powers and establishing the form of a new Federal Government,—and not for any purpose of resolving juridical doubts, touching an author's or inventor's right, took the subject as they found it; and upon more enlarged views, and with a more liberal policy, than you appear, Sir, to have penetrated, simply reserved to the Legislature of the Confederacy, a limited, but exclusive power of interference in regard to it.

But although it be difficult to discover from your language, any consistent opinion of the intent of this article of the Constitution, your explanation of a Patent granted under its authority, is sufficiently clear. You assert in terms, "that the only security Con-
"gress is empowered to give to the inventor by the
"Constitution, is *a title to his discovery.*" This, you say, "is the office and use of a Patent,—it ascertains
"the property, and affords evidence of title."† It is

* Colden's Vindication, p. 109.

† Ibid. 110.

possible, that it may be so; but then you must admit it to be a very impertinent office, and a very superfluous security. If I understand you rightly, *the office and use of a Patent, granted in virtue of a power in the Constitution of the United States of America, for promoting the progress of the Arts and Sciences, is merely to ascertain and secure a title acknowledged by you to have been recognized by that very Constitution, as a pre-existing and valid title!* That is, *Congress, in virtue of their high powers, may issue a paper* TO ASSURE OR MAKE VALID A TITLE PREVIOUSLY ADMITTED TO BE BOTH VALID AND SURE!!!

I ought, indeed, Sir, to be deeply impressed with the extent of your acquirements and the solidity of your well-earned reputation,—for you have laboured hard to oppress me with their weight;—yet, I would modestly suggest the possibility of an error in this particular instance,—an error arising, perhaps, from that ardent temperament, which, satisfied with the truth of a conclusion, disdains to examine scrupulously the premises upon which it rests, or the words in which it is conveyed. *One of the uses of a Patent*, Sir, is a very distinct thing from the rights conveyed by it,—and of its various uses you have certainly not well explained the only one you have attempted. A Patent is evidence, that the Patentee has duly made a claim to the right of an inventor,—and it is so far *prima facie* evidence of title;—but the facts inventor or not, invention or not, are still open to inquiry, and upon their proof depends in part, the Patentee's right of recovery.—I say, Sir, *in part*,—for, although the Patentee be inventor, and the invention be undisputed,—yet if the necessary *specification* be not made, no recovery under the Patent can be had.

Now, what is a specification? It is "a description "of the invention patented, and of the manner of "using, and process of compounding the same, in "such full, clear, and exact terms, as to distinguish "it from all other things before known,—and to en- "able any person skilled in the art or science of "which it is a branch, or with which it is most near- "ly connected, to make, compound, and use the "same."* The object of the law in rigorously exacting this plain and intelligible description of the thing invented, and of its principle, is manifest,—and the perfect harmony between the power of the Constitution, and the Act of Congress, passed in virtue of that power, affords a practical commentary of great weight and authority, in favour of the construction which I have suggested to your considerate reflection.

Under the *Power*, Congress was authorized to secure the interests of the inventor in his term, and to provide likewise for the interest of THE PUBLIC.—Under the *Law*, passed in virtue of that power, Congress accomplished the first object by a *Patent* to the true inventor, the second by a *Specification*,—thus fulfilling the double intention of the Constitution,—the security of the term acting as a strong excitement upon the inventive powers of genius,—and the reversionary interest, in its consequences, multiplying to an indefinite extent, the *Public* Capital, in the free use of those arts which save the labour of man, and increase his power over the elements that surround him:—and thus effectually protecting an interest, which, whilst it promises almost infinite utility to all,

* *Vide* Laws of the U. S. Cong. 2 Sess. 2. Ch. 11. Sec. 3d.

promotes the future convenience, ease, and comfort of each individual.

In stating the consideration of the grant to Messrs. Livingston and Fulton, to be meritorious, and in appealing so feelingly in its favour to the good faith and honesty of the State, ought it not, Sir, to have occurred to you, that good faith and honesty are of no kindred, or party, or particular connection? We are not unfrequently deluded, and we not unfrequently cheat ourselves,—with words; and thus the understanding becomes corrupted, and is occasionally betrayed by its ablest ally. Notwithstanding your happy exemption, Sir, from the "tramels of your pro-"fession," you appear to be somewhat obnoxious to this general cause of error, or you might otherwise have apprehended, that although the Citizens of the Union may not chose to justify their right to reversionary interests in future improvements, nor authors to vindicate the security of their limited terms,—on the ground of a "technical" bargain or *contract*,—yet, in truth, they may place them, if not upon the same, upon higher ground;—for upon what basis do these interests rest? They are rooted in the solemn agreement of every State in the Union;—they are supported by a consideration of mutual forbearance in the exercise of the powers of Legislation amongst co-ordinate sovereignties,—for an end—the most beneficial, and of universal concernment,—the unchecked progress of Science, Literature, and the Arts.

Now, whether this be a trust or a "contract," give it what *name* you please, the *nature* of the consideration yet remains, and the binding force of the obligation is unchanged. An Act, therefore, of the

Legislature of any individual State, passed in violation or subtraction of interests so founded and secured,—is as much a breach of faith and honesty, as if the State were to repeal the *right* vested in Messrs. Livingston and Fulton. This would be a violation of both faith and honesty, and notwithstanding your representations to the contrary, you know, Sir, that I have never advised it.—Whether the extraordinary *remedies* given to protect that right from judicial investigation, which you so strenuously uphold, do not to authors and inventors, and the public, involve as great a violation of faith and justice,—remains for you a thesis; for the Legislature,—a matter of judgment.

To say, that "the only security which Congress "are empowered to give to an inventor by the Con- "stitution, is a right of property in his discovery,"* appears to me, at least an *unadvised* assertion: When you further say, that a Patent only "*ascertains* the "title,"—your assertion may be true or false, as you contract or enlarge the meaning of a term not accurately defined, and, at best, can only give rise to a verbal dispute—terminating where it began. If, however, it be meant, that a Patented invention, within the meaning of the Power in the Constitution, and of the Acts of Congress, confers no right nor property, because both are recognized as previously existing, and therefore cannot arise from the Power and the Laws passed in virtue of it;—this may be true;—but then, it is nothing to the purpose. It evades the question, and neither meets nor resolves the dispute.

* Colden's Vindication, p. 111.

The right, it is admitted upon both sides, was a previously existing one. The Power did not create the right,—nor does it profess to do so.—It *limits* the right of property, and *secures* what it professes to limit;—but the only security to which it points, or which it can indeed give, is what results from an exclusive power of Legislation.—*It is this paramount authority, which, restraining the interference of subordinate sovereignties, gives the requisite and intended security to an author or inventor, and creates a reversionary interest for the benefit of the Public.* IT IS THIS WHICH FINALLY SECURES TO HIM AN EXCLUSIVE RIGHT IN HIS INVENTION OR DISCOVERY, BY LIMITING TO HIS USE A TERM OF YEARS IN THE THING PATENTED, THAT NO OTHER POWER IN THE UNION MAY ENLARGE, ABRIDGE, OR ALTER.

If this result be not the security,—and if the exclusive power of Legislation be not the means of that security,—shew me, Sir, what is?—You have not shewn it,—you *cannot* point it out;—you have negatived all power of future explanation, by saying, that "the right of property is to be secured, *and nothing* "*more.*" Upon this supposition, the terms of the power are a formal pedantry,—a set of words combined with great appearance of skill and caution,—"signifying nothing;"—or at most, productive of a frivolous result, inconsistent with the known wisdom of the framers of the Constitution, and useless to any purpose whatever, of a confederate nature. But I waive the advantage of a rash and hasty assertion,—I will not push home to its consequences this bald construction;—I give you liberty to retract and explain;—the Public expect from you both the one and the other;—they look to your ingenuousness for a re-

traction,—to your pride, for some explanation;—they take an interest, Sir, in your advancement, and they have by purchase, a right to your confessions.

Having shewn the nature and result of the means intrusted to Congress, for securing to authors and inventors their exclusive rights, I now proceed to examine, whether there be any thing in your distinction between the "title" and "the unlimited use "of the invention," to invalidate or impugn my doctrine. In opposition to an opinion hazarded in my former letter, you maintain, that "though Congress "have the power to ascertain the title of the in-"ventor, the individual States may yet control "the Patentee in the use of his invention."* The consideration of this objection necessarily leads me to inquire into the nature of the thing to be secured.

In the first place it is to be remarked, that the property which an author may have in his writings, appears to be different from that which an inventor may have in his discoveries. The former has no beneficial use of property in his writings, independent from what may be derived from a sale of them,—the latter may, in a very restricted sense, use his invention for purposes of profit,—to both, however, a right of sale is indispensable,—more manifestly so with the first, than with the last;—every other subject in the two great legal divisions of property may be partially enjoyed, though the right of sale be restricted or forbidden;—but the right of property of authors and inventors is so essentially connected with

* Colden's Vind. p. 108,-111.

the right of sale, that the inhibition of that right annihilates the whole subject.

The right of sale in these instances, is an elementary principle in the very idea of Property. Separate it from the other elements, and the complex legal notion of Property is destroyed. The *value*,—the thing intended to be secured by Law, is lost to it.—This, Sir, is no metaphysical distinction. All human Laws proceed upon the assumption of *value*, as implicitly involved in the idea of Property;—and as new discoveries in Science, and new improvements in the arts of life, give rise to new modifications of Property,—the first thing that attracts the attention of the Legislature in any subject, as being capable of appropriation or exclusive ownership—is its VALUE. Accordingly we find, that the Laws passed by Congress, in virtue of the Constitutional power now in question, secure to an author or his assignee, "the sole right and *liberty* of printing, reprinting, "*publishing and vending*" his work;* and to a Patentee, 'the full and exclusive right and *liberty*," within the term limited, "of making, constructing, *using and* "*vending to others to be used*," his invention or discovery.†

Again;—though all things which have a use, have also a value, independent of the right of sale;—yet, in most subjects, the use without the right of sale, constitutes an adequate value. Land, for instance, if not allowed to be transferred by sale, by devise, or descent, would, nevertheless, have that value which would require Law to guard, to define, and to

* *Vide* L. U. S. Cong. 1. Sess. 2 ch. 15.

† L. U. S. Cong. 2. Sess. 2. ch. 11.

regulate its enjoyment; and however important the right of sale may be to the full enjoyment of all property,—it is, in most cases, but an *accessary*. In the instances in view, however, it is the *principal*. In other subjects, a right of sale is implicitly involved in every contract of absolute transfer, as a necessary incident;—but when an author sells a book, of which he has the copy-right secured to him, or an inventor a patented machine, the right which is transferred, is merely a right to the individual book or instrument;—the general power of sale still remaining in the author or inventor. The purchaser, however, of a Patentee's, or of an Author's RIGHT, is the purchaser of the general right of vendition. This is the principal in the nature of such a contract,—it is the subject matter—the thing to be disposed of *quod ipso venditione solum fruitur*:—and as *the right to sell* is the principal and beneficial right,—*the right to use* is a secondary and necessary one, without which the principal cannot be enjoyed;—and both rights of sale and of use are assignable.

Now, the grant by this State to Messrs. Livingston and Fulton, in that latitude of construction for which you have contended, inhibits to a Patentee, under the authority of the General Government, or his Vendee, the *right to use*, and consequently renders the right of sale a nullity. But the enjoyment of both these rights is necessary to this modification of exclusive propriety; they constitute it *Property*;—if, therefore, they be taken away, the Property itself is destroyed.

The nicety and solidity of your distinction, Sir, between the security of a Patentee's title, and his

right to use his invention, may now be clearly seen. A Patentee, according to that distinction, is secured in his right to *sell*,—but he and his Vendee are prohibited from the right to *use*,—and, peradventure, none will *buy* what none may use! The Patentee then enjoys a "*perfect title*" to that which he cannot use,—and which nobody will buy,—and from which no earthly benefit can be derived by any body. This too is the effective result of a Power vested in the paramount authority of the National Government,—a Power given by the Constitution for the express purpose of "promoting the progress of science and "the useful arts;"—this then is the "exclusive right" secured by Congress to "Authors and Inventors" in virtue of that Power!——It may be so,—you seem to labour the point earnestly, and as I don't wish to be thought fastidious, I am willing, if you still persist, to admit it to be a "TITLE;"—but, then, Sir, you must confess, that though a "perfect title," it is a title to—*nothing!* It has, I allow, a just claim to the praise of great abstract beauty,—but in return, you must acknowledge, that it is of no possible use under Heaven.

To shew, however, that the right of property may be secure, though the use and enjoyment of it be prohibited, you have instanced several ordinances, for regulating the use of property within the jurisdiction of a Municipal Incorporation. It never was denied, Sir, that such regulations were lawful; nor am I now obliged to contest the validity, or impeach the policy of the bye laws passed "by the Mayor, Alder-"men, and Commonalty of the City of New-York, in "Common Council assembled," to abate nuisances

of any description whatsoever. The select cases you have put of the Hogs, the Potatoes, and the Lions, however happy, as a display of easy, elegant, and familiar wit, are, I regret to say it,—not apposite to the argument. To make them so,—it ought to have been shewn, that a higher authority was entrusted with, and had exercised a Power to secure those very rights of use which the inferior jurisdiction prohibited. To make them so,—you ought, Sir, to "demonstrate," that there is no difference between a restraint of the right to use property in some one particular by a competent authority, and a destruction of the subject itself, by an authority having Power neither to regulate nor restrain.

Apter illustrations are afforded, you think by the several cases of exclusive grants by an individual State, of a Ferry,—of an exclusive right to carry passengers by land,—and of a several Fishery:—But if I do not greatly deceive myself, it is barely necessary to state the nature of these several grants, in comparison with a patented property, to render it as evident, that the rights secured to the State grantees, never can conflict with the exclusive privileges of a Patentee,—as it is already obvious, that the rights secured to Messrs. Livingston and Fulton, must interfere with the rights of a Patentee.

What, Sir, is *a right of Ferriage?* It is "an exclu-
"sive right to receive toll for the conveyance of pas-
"sengers over the water, from one given point to an-
"other." So the privilege sometimes vested in the proprietors of stage coaches, on certain unfrequented roads, is "an exclusive right to receive a certain
"hire for the carriage of passengers, in considera-
"tion of keeping up a line of stages upon those roads,

" for the public accommodation."—And a *Several Fishery*, is " an exclusive right to catch fish within " certain limits."

Now, what rights have the grantees of these exclusive privileges in common with a Patentee? How can their particular monopolies respectively interfere with the right of a Patentee in his invention or discovery? In the case of a ferry, the owner of a Patent boat may sail from point to point, simply paying to the grantees of the right of ferriage their accustomed rates. A patented wheel carriage, implies no right, and directly confers none on the Patentee, to carry passengers in it for hire. He is bound to keep up no line of patented vehicles for the accommodation of the public. Over the same road, however, within the limits of which the grantees of the State, have the exclusive right to receive hire for carriage, the patentee or his vendee, may, on his *Velocipede*, or in his Patent Post-Coach,—travel at his pleasure. And the Patentee of a newly invented seine, or trolling net, has no more right to use it in the waters of a Several Fishery, than in the trunks and ponds of a private gentleman: nor do I apprehend, Sir, that his full right of enjoying his Patent net can depend, in any degree, upon the liberty of stealing other people's fish.

But in what do the exclusive privileges to carry passengers, by land or water, or to enjoy a Patented net, in lawful places, resemble the grant to Messrs. Livingston and Fulton. That grant is not to carry passengers from New-York to Albany:—It is an exclusive right to navigate all the waters within the jurisdiction of this state, by STEAM. The difference is not, as you insinuate, merely *in the extent of the*

*grant.**—It is in *the nature of the thing granted.* The former, (i. e. the grant to carry passengers,) however indiscreet, as an odious monopoly, would not interfere with the right of a Patentee under the power of Congress.

The things granted in the two cases, which, in your haste, you appear to have overlooked, or to have confounded, are essentially different. The grant to Messrs. Livingston and Fulton, of an exclusive right to navigate the waters of this State, by all and every species of boat or vessel propelled by the force of Steam, vests in them, for that particular purpose, the exclusive control OF AN ELEMENT OF INVENTION. In the case of a ferry or fishery, and a right to carry passengers by land, no such exclusive right in an element of invention is granted. In the first case, it is a right to take toll,—in the second, a right to catch fish,—in the third, an exclusive right to receive hire for the carriage of persons.

The grantees of these privileges, are not grantees of the sole right of navigating all kinds of vessels or boats,—of driving all sorts of wheel carriages,—or of using all kinds of seines, rods, hooks and lines. They are not grantees of exclusive rights to use the elements out of which boats, wheel carriages, or fishing tackle may in future be invented; nor do their privileges interfere with the rights of future inventors to use the discoveries which may be made from the respective elements of these subjects. By such grants, no element of invention is, in fact, touched, much less so monopolized, as to stop the progress of improvement itself, by intercepting, in a noble and useful discovery, that appropriate reward,

* Colden's Vindication, p. 116.

which the Constitution wisely invests Congress with the sole prerogative to confer.

But you assert that I have not hesitated to push my doctrine to a monstrous conclusion ;—a conclusion, which denies to the States separately, all power to promote the progress of art and science ;—and you insist, that according to my reasoning and opinions, an individual State can neither pass a "law, "giving encouragement to a new discovery, or new "invention, whether patented or not, nor grant any "privileges which may invite the introduction and "use of any improvement in agriculture or in any of "the mechanical arts, or in the sciences, which may "have been made at home or abroad."* I never did deny, Sir, the power of the individual States to promote the progress of art and science. I never said, nor can it be inferred from any principle advanced, or train of reasoning pursued, by me, that a State may not pass laws giving encouragement to new discoveries or inventions ;—nor, lastly, that the States, severally, cannot invite the introduction and

* Vide Colden's Vindication, p. 106. The relative pronoun "which," in the sentence just quoted in the text, is meant, I presume, to be referred to the antecedent "improvement," beyond striking distance. But the sentence is obscure, as the relative may either refer to that antecedent, or to the word "sciences:" the latter is the grammatical construction. But it can hardly be meant that the sciences are subjects of *manipulation*, and "made" either "at home or abroad." I merely note this, as one instance out of many, where the language and construction are perplexing in the extreme. I have, nevertheless, always endeavoured to seize the meaning without cavil, or attempt to expose any casual inaccuracy. I must confess, however, that I have encountered much difficulty "in sounding on my dim and perilous way." Perhaps, sometimes, I have missed it.

use of improvements in agriculture, or in the mechanical arts.

These, Sir, are conclusions of your own, not mine ;—nor are they the legitimate consequences of either the doctrine or the argument. On the contrary, I have distinctly affirmed that the several States have all power to promote letters and the arts;—to give encouragement to new discoveries, and invite improvements in science, except ONE, and that one is the power of securing to authors and inventors a right of beneficial ownership in their inventions and writings. This has been surrendered to Congress ; and any encouragement to discovery, invitation to the introduction of improvements, or attempt to promote the progress of literature, science, and the arts, which interferes with, or prevents the exercise of that ceded power, is a resumption of authority, fairly and on a good consideration, yielded to the General Government.

An individual State can neither secure to an inventor an exclusive property in his invention, nor may it, for any known or used improvements, grant exclusive privileges in the use of a thing which may become the subject of Patent, and interfere with a Patentee's veritable right of invention. But the States separately may, nevertheless, by premium, by reward, by bounty,—in any other way that ingenuity or good policy may dictate, promote the progress of learning, encourage new discoveries in science, and invite the introduction of new improvements in the liberal and useful arts,—in " agriculture or me-" chanicks." And the reason of the difference which seems to have escaped a sagacity sharpened by the toil of " five-and-twenty years," is simply this,—

all the other modes of rewarding science, encouraging letters, promoting the liberal, and inviting improvements in the useful arts, may, without danger of being defeated by the clashing laws of co-ordinate Legislatures, be safely committed to the several independent sovereignties of one Confederacy, whilst the simple mean of securing a right of property must be in the Supreme Federal Authority alone; for in the peculiar condition and circumstances of the Country, that end cannot otherwise be effected. Thus, then, have I clearly distinguished what you have unwisely confounded, hastily misunderstood, or unhappily misrepresented.

And to trace the line still farther:—Monopolies, indeed, whether of exclusive privileges in a known improvement, or of whatsoever kind, though generally odious and impolitic, are yet, as we have seen, within the power of an individual State to grant. They do not necessarily,—they may not accidentally, interfere with an Author's or Inventor's right. An exclusive privilege, under a State grant, in an imported improvement, restricted to the use of that improvement, is in no wise incompatible with a Patentee's right to a new invention. If a State grant exclusive privileges to the importer of a foreign invention, as the invention is *known*, it is not the subject of a Patent, and does not come within the intent of the power ceded to the General Government.

The State grant, in such a case, may be allowed to be valid, it usurps no authority, and interferes with no rights intended to be exclusively intrusted to Congress to secure. It is not, then, because the act granting exclusive privile-

ges to Messrs. Livingston and Fulton, was passed professedly to promote the progress of science and the useful arts, that it is deemed unconstitutional,* but because it interferes with the only means which were exclusively conceded to the National Legislature for the same purpose,—and renders the exercise of its Power, in respect to those means, a perfect nullity.

Nor is the grant to Messrs. Livingston and Fulton, which you seem doomed or fated to forget, to mistake, or to confound with things dissimilar,—a grant of exclusive privileges, in a known improvement. But it is the grant of an exclusive right to navigate the waters of this State "by means of STEAM, or FIRE." It is the power of the exclusive application of those elements of invention to one purpose, to wit, Navigation:—Now, as the application of these elements to the purpose of navigation, may, and, doubtless, will be the object of numerous discoveries, all the fair subjects of a Patent,—it is obvious that the grant of the exclusive privileges in the elements themselves, directly, and by a foreseen consequence, must interfere with the privileges of a Patentee, who shall discover a new and beneficial mode of applying steam or fire to the propelling of boats.

The monopoly in question, also differs from a grant of exclusive privileges in a known improvement, *in the nature of the thing granted.*—The latter is the grant of the use of an invention, which may not be patented;—and in the case of an imported improvement, it is the grant of an alien non-resident's invention.† But the other is a grant of exclusive

* Vide Colden's Vindication, p. 117.

† Vide U. S. Laws, Cong. 2. Sess. 2. Ch. 11.

privileges of that out of which infinite discoveries may be made; the propriety in which, it was intended that Congress alone should secure. To secure a right of property in such inventions, is, as we have seen, to secure its exclusive use. But such use Congress cannot secure to one person, if the State have already granted to another that which deprives the first of the power of its beneficial use.

Neither, Sir, will the admission of this doctrine be fraught with the mischiefs which you affect to apprehend.* It invalidates no ordinances to promote public convenience,—it clashes with no laws for the preservation of health or morals. The acts to establish Turnpikes are safe. The grantees of Toll-Bridges may rest in security. Ferry grants may "stand," without the danger of being overturned by patented vessels. The vendors of pernicious medicines will yet be subject to the correction of the Common Law;—and the Patentee of a licentious Book, will find nothing in his copy right to protect him from the legal punishment necessary to preserve from corruption the religious feelings, and moral sentiments, of the Community. This fearful catalogue of evils is the creation of your own distempered and whimsical imagination,—the frothy bubble thrown off from the fermenting passions of an interested and monopolizing alarmist. What have your quarantine Laws to do with this question, good Mr. President of the Board of Health? How can they affect the rights of a Patentee? What is to hinder a Patented vehicle from passing quietly over a Toll bridge on a Turnpike road, upon payment of the legal rates? Why may not a Patented vessel ply

* Vide Colden's Vind. p. 112.

from one point to another of a Ferry, upon paying to the proprietor of the right his accustomed ferriage? Why, Sir, may not all this be done, and the grantees of Turnpikes, Ferries, and Toll bridges, sleep like Lottery Managers, *placida quiete composti?*

Does a Patentee acquire illegal privileges by his Patent? If the publishers of your "VINDICATION" were indicted for scurrility, could they plead their copy right in justification of the Libel? No, Sir, I will venture to assert, that in all cases of this kind, there is an adequate and existing remedy, either in the body of the Statutes, or in the forms of the Common Law. A more accurate knowledge of the subject would have calmed your fears, and silenced the dull noise of your ceaseless lamentations.—It would have taught you that a Patent is merely evidence that the Patentee has duly claimed to be an inventor. It would have enabled you to perceive, that a mere paper evidence of that claim, does not preclude the inquiry whether the thing Patented is the proper subject of a Patent;—whether it comes within the intent of the power in the Constitution? These are questions still open to discussion. The Patent confers nothing, if nothing useful be invented.—It gives no right, except to a true inventor,—no property, except in a useful invention.

If a thing, in itself pernicious, be Patented, what would a Patentee recover, for a violation of his right? If an Author of an indecent publication prosecute for a piracy of his copy right, what damages would he get? You really seem, Sir, in this discussion, to have forgotten elemental principles. *You should have looked into your* BLACKSTONE.* I have the exclusive

* Vide Colden's Vindication, p. 152.

right to my own property ;—but I may not erect on it a manufactory to poison all around me. I have the exclusive privilege of riding my own horse,—but I may not gallop him over my neighbour's fields. So I have the exclusive right, as Inventor of a pernicious medicine, or Author of a licentious book, (if such right can be,)—yet the right of invention, in neither of these cases, confers an *irresponsible* power of sale ;—because simply *a paramount principle involved in the body of the Law, and running through every particular, commands me* SO TO USE MY OWN THAT I INJURE NEITHER THE RIGHTS OF OTHERS NOR THE INTERESTS OF THE PUBLIC.

There is, then, no necessity for the interference of the States, or of Congress, to prohibit, by law, the use of a pernicious invention; yet you assert, (with the dogmatic confidence, which belongs rather to your new office, than to the cautious modesty of your ancient profession,) that "if the State Legislature cannot control the use of an invention, "it is above all Law, for Congress," you pronounce, "has no such power."* The proposition is too broad for direct refutation ; narrow it to a point, and it refutes itself. If you intend that Congress cannot regulate the rights of Patentees, or fix the terms of exclusive enjoyment, you are so evidently wrong, that I disdain to set you right, otherwise than by referring you to the act of Congress, where, amongst other things, you will find a provision for the repeal of a Patent obtained on false suggestions.† If you mean, however, that Congress have no power, after

* Colden's Vind. p. 111.

† *Vide* Laws U. S. Cong. 2. Sess. 2. ch. 11. Sect. 10.

granting a Patent, for an useful invention, to the real inventor, causelessly to prohibit the use of the invention,—I agree that they have no such moral or constitutional power:—neither can any sovereignty have it, except by that omnipotence, which may do wrong, because no power exists in the State to question the *fiat* of its sovereign will. If you mean that no power exists in Congress, or in the States, to prohibit the use of a pernicious invention, or the sale of a licentious publication, on the supposition that Congress have the exclusive power of Legislation, contended for by me,—the conclusive answer is, that the ordinary Courts of Law are bound to notice whether the thing Patented be a public mischief, or a public indecency, and to punish criminally both the one and the other.

But your objection supposes that the Patent confers, on the Patentee, a right to sell poison, either literary or medicinal. That this is not so, is still more manifest from the consideration of this simple principle,—*that it is an implicit condition involved in the grant of every Patent, that the thing Patented be neither pernicious nor immoral:*—a principle which protects the public morals, and renders a civil prosecution by an inventor, whose discovery is either pernicious or licentious, utterly hopeless. And this answer, which shews that no prohibitory Laws are necessary, moreover proves, that either the Federal Legislature, or the individual States, may prohibit what is noxious, notwithstanding Congress may have the undoubted right to secure the beneficial ownership in what is usefully invented.

Again;—it is said, that "a State may prohibit the "use of an invention secured by Patent, and confess-

" ed to be beneficial, *lest it should interfere with the sup-*
" *posed extent of a State grant* ;"*—and you thus distinguish, " that if the invention only interfere with the " *supposed* extent of a State grant, the prohibition may or may not be *discreet* ;—if with the *actual* extent, then it would be a *rightful*, i. e. a *constitutional* prohibition.† This distinction between the actual and supposed extent of the State grant, is an affectation as puerile as it is impertinent. The States have a right to prohibit the use of a beneficial invention, or they have it not;—and whether they *discreetly* exercise their right, is not the question,—but whether they may *constitutionally* exercise any power at all.

If we consider the broad and general proposition, we shall naturally be led to the qualifications which limit the authority of the individual States, in the exercise of their sovereignty on the subject. If the use of an invention be prohibited, because, from the peculiar condition and circumstances of a particular State, that invention, which is elsewhere beneficial, is there contrary to the public good ;—a power of Legislation is merely exercised which is inherent in every separate sovereign member of the General confederacy. From the nature of that Confederacy, though each State have a right to judge and act, it has no power to render its acts obligatory :—a provision is wisely made, for the purpose of bringing the validity of the exercise of such judgment to a legal test; and the means of obtaining a definite judicial opinion upon every Constitutional question, is clearly pointed out by Law. Each

* Vide Colden's Vind. p. 119, 120. † Ibid. p. 121.

State has a right to exercise its discretion upon all Constitutional points as to the limits of its own power, but the legality of that discretion may be questioned, and the Law finally controlled or settled by the Supreme Judicial Power of the Union.

It may, then, be safely conceded, that a State Legislature has full right to exercise its judgment in prohibiting the use of a Patented invention; and if the invention be injurious to a particular State, it is not unfair to suppose that its use in that State may be justly proscribed. The intent of the power vested in Congress, was not to secure certain benefits for all the States, at the expense of the interests of any one of them. The object of that power was evidently different,—it was simply to enable Congress to secure to Authors and Inventors the exclusive right of property in their writings and discoveries;—the inhibition, therefore, of the use of an invention, injurious to the interests of a particular State, can never frustrate the object of that power: the case does not come within the meaning of the Constitution:—it is one of those things which are tacitly excepted. Granting, then, that such a Law be passed, and be determined by the Court, in the last resort, to be Constitutional, it does not follow that all prohibitions, much less a prohibition of an invention secured by Patent, and acknowledged to be beneficial, are equally lawful.

Cases may, indeed, arise, in which even such an invention as the one last described, might be the subject, on peculiar grounds, of a rightful prohibition,—*but the distinguishing peculiarity must be such as to shew the case to be an exception to the intent and meaning of the Power limiting the Sovereignties of the parti-*

cular States. Upon no other except this, or an equivolent supposition, can such prohibition be supported,—upon such it may. But it is manifest that a prohibition resting on such grounds, is very different from an interdict, resting upon none—nor defensible upon any *authority*:—but "*Stat pro ratione* "*voluntas.*" This, on the contrary, is an inhibition upon the principle of a specified necessity of exception, leaving the general Law not only unquestioned, but confirmed.

A prohibition, whether justified upon the ground of an arbitrary discretion, or of a capricious will, or even proceeding on the assumption of driving a good bargain for the State, is evidently a very different case. Upon the former supposition, the interdict may be constitutional, allowing the power to be exclusive;—upon the latter, it never can. It matters not, then, whether the contract made between the State and its grantees, were discreet and *proper*—if it be a fair contract; whether the bargain be a good or a bad one, the State and the party are equally bound:—but the question recurs, had the State a right to make a contract including such inhibition? If this be even doubtful, what, Sir, is the character of those Laws which stop up the access to the Courts, and throw impediments in the way of those who ask for a judicial decision of the question?

The ground upon which you contend that a State may interdict the use of an invention, confessed to be beneficial, is singular indeed.—It may be prohibited, you say, "*lest it interfere with the extent of* "*a State grant.*" What is there in this circumstance to give power to the State, which it has not other-

wise? Why does the interference of a Patented invention, with the extent of a State grant, give the State a right to inhibit the use of the Patent? This circumstance can neither guide its discretion, revive its powers, nor create them. If the State have a right in favour of its own grant, to prohibit the use of a Patented invention, then its grant must be the paramount Law. The interference of the Patent with the rights of the grantee, merely gives rise to the point to be decided,—it raises the question whether the Patentee, or the State grantee, have the better right; but it neither justifies the proscription of the Patent, nor can it serve, in any way, to direct legislative discretion. With what intent the circumstance was introduced into the sentence, it is difficult to conjecture; with what effect, may easily be determined:—It is a confused statement of a plain question, but neither the confused statement, nor the affected and frivolous distinction, in the slightest degree, alters the nature of the problem, nor varies the rule of its solution.

What then is the amount of this oracular opinion, announced with all the solemn mockery of the Tripod? It is, Sir, if I can unfold the mysticism, and penetrate the obscurity of its meaning, that an individual State may prohibit A, B, and C, from using or vending any newly invented machinery, made, say of Tin, because it has granted a previous monopoly in the use of all things to be made of that material, to D. If one State may grant such monopoly, each may do it. How then can Congress secure to A, B, and C, the exclusive right to their inventions? or, what is left to be secured to those individuals? Is it the privilege of enjoying the exclusive

possession of their machines? That right, you admit they have, independent of the Constitution.

But suppose, Sir, a scientific discovery be made, by a true Philosopher,* after years of intense study, laborious investigation, and persevering research.—Suppose it of as much promise to the great interests of learning and humanity as those of a Newton, of a Galileo, or a Franklin. He desires to make his discovery known to the honour of his Country and the advantage of mankind,—he merely asks to reserve to himself the copy-right of the publication, which is to announce it to the world. He is told, that true it is, Congress have power to secure to him the exclusive right to his work, but each State, nevertheless, having power to grant monopolies to individuals, of the profits to be derived from the sale of all Books of Science, have actually granted such monopoly. He is informed, that he may publish if he please, or he may let it alone;—but, that if he wish to publish and *sell*, he must bargain with the State Monopolists, before he will be permitted to dispose of a single copy of his work; and if he do not accede to the terms they may elect to impose, the public must lose the benefit, and he the reward of his industry and talents.

If he expresses either astonishment or indignation at a sophistical construction of the Constitution, by which the exclusive right to the fruits of his labour and his genius is narrowed to the privilege of reading his own book, and lending it to his friends; it may, perhaps, be a consolation to him to know, that such is the opinion of the Worshipful the Mayor of New-

* I beg it may be distinctly understood, that I here intend no personal allusion to any member of "the Literary and Philosophi-" cal Society of New-York."

York, a gentleman of the law, who, after "more than "five and twenty years of unremitting and devoted "application to his profession," invested the proceeds of his successful labours in a State Monopoly, and became a loiterer in the Courts of Science;—the *Licentiate* of a "Literary and Philosophical So-"ciety,"—the "Friend" and the "Biographer" of "ROBERT FULTON!"

If the spur of self-interest still goad our Philosopher to anger, or disappointment vex his spirit, perhaps, Sir, he may be effectually soothed to the calm of that quiet temper which becomes his character, by the suggestion, that he suffers "*lest his Patent* "*should interfere with the extent of a State grant;*" and, then, no doubt, he will "go on his own way rejoic-"ing" in the happy simplicity of that pertinent distinction between the *actual* and *supposed* extent of such a grant, which admits in the one case a constitutional power to cheat him of his right, and in the other, leaves it barely discretionary with the State Legislatures, whether they will do so or not!

I shall not now deny, Sir, that you have fairly met the question, on the determination of which the constitutionality of the grant to Messrs. Livingston and Fulton, must eventually depend. In my former Letter, I expressed a doubt, whether you would "so far hazard "your character as a Lawyer, as to venture the as-"sertion, that a State may rightfully prohibit the use "of an invention, secured by Patent, and confessed "to be beneficial, lest it should interfere with the "supposed extent (substitute *actual* if you will,) of "a State grant." The doubt which I expressed, I honestly felt, for I could not then believe, that even your interested zeal would embolden you to assert,

in effect, that a State grant is paramount to the Constitution and Laws of the United States. You have effectually convinced me of my error, and the Public, I should think, must now be satisfied, that a mere regard to your professional reputation will never deter your gallantry from "venturing any assertion," *which the interests of the Monopoly may require you to maintain.*

Permit me then, to call your attention to the obvious and inevitable consequences of the doctrine which you espouse. To establish that doctrine, you will find yourself reduced to the necessity of maintaining *in terms* one or other of the following propositions:—either, 1st. That each individual State without a violation of the constitutional powers of Congress, may vest in whom it pleases, that very "*exclusive* "right" to an invention, (according to your own definition of that right,) which it is the "office of a "patent" to secure to the inventor;—or, 2d. That two persons claiming under opposite titles, may each have an exclusive right of property in the same subject, or exclusive privileges of the same nature, at the same time.

In the discussion of this subject, I shall follow your example, and confine myself to the consideration of the "*Bargain*," (as you are pleased to term it,) made by the State with Messrs. Livingston and Fulton. The terms of this bargain you have stated very incorrectly. The State of New-York has not, on any condition, agreed to prohibit "for a "stipulated time, the introduction of any future im- "provement in the application of Steam to the pur- "pose of navigation."* It has not "consented to

* Colden's Vindication, p. 121.

" surrender for a certain advantage, and for a limit-
" ed time, the benefits of such future possible dis-
" coveries ;" but by the general terms of its grant, it has vested the exclusive privilege of using every such improvement, in Messrs. Livingston and Fulton, and their assigns. The exclusive privilege of navigating the waters of this State by the power of Steam, it is obvious, includes every imaginable mode and form of applying that power to the contemplated object. The effect, therefore, of the grant, is precisely the same as if every possible invention and improvement applicable to the subject had been known to the Legislature, and had been specifically enumerated in the Law. Thus the inhibition to the Patentee of every such improvement, to use his invention within the jurisdiction of this State, is not direct and positive ; but is merely a consequence of the hostile and incompatible privilege vested in the State Grantees.* Such an inhibition, therefore, evidently presupposes and implies the validity of the grant;—for, if the grant be unconstitutional and void, an inhibition which has no other object than to protect the *rights* derived under the grant, must be equally void.

Let us then suppose, that an improvement shall now be made in the application of Steam to the purposes of navigation, of incalculable value;—an improvement that shall accelerate the rate of motion, from ten to twenty miles an hour, and shall proportionally reduce the expenses of navigation,—the fortunate inventor, armed with a patent, which pro-

* It is plain, that there is no *absolute* prohibition of the use of any such improvement, for even according to Mr. Colden, it may be used by all who can obtain the licence, both of the Monopolists and the Patentee.

fesses to secure to him "the full and exclusive right "and liberty, of making, constructing, using, and "vending to others to be used, the said improve- "ment,"—repairs to this enlightened and powerful State, in the certain expectation, that the enterprise and liberality of its inhabitants will afford to his ingenuity an ample reward;—his approach is barred;—he is warned, that the mere attempt to introduce his improvement, will subject him to enormous penalties, and involve him in a contest that must lead to his ruin;—and why is it, that this inventor is to be defrauded of his just reward? Why are the Citizens of this State to be deprived of the rich benefits which the introduction of his improvement will be certain to afford?—But one answer can be given.—This enlightened State has created a sweeping monopoly, by which this very "exclusive right and pri- "vilege of using his own invention," which the Patent secures to the Inventor, is vested in the Mayor of New-York, and a combination of wealthy associates.

Here then is a collision,—a conflict of rights, out of which it would seem to an ordinary apprehension, the plain question instantly arises,—which has the preferable title? If the Patent be valid, then the State grant, so far as it interferes with the rights of the Patentee, must be void;—if the exclusive privilege of the Monopolists, in the extent that it is claimed, is to prevail, then in this State the Patent is a nullity, and the Constitution and Laws of the United States, are not "the Supreme Law of the "land." And how, Sir, do you escape from this conclusion? How do you, an *emeritus* professor, rescue yourself from the disgrace of supporting a doctrine, which the most ignorant tyro would blush

to assert? Have you felt that the ground on which you were treading, was unsafe and perilous? Have you sought to retrace your steps, and gain the firm footing of Reason and of Law? No,—determined at every hazard to advance, by a desperate effort, you extricate yourself from this difficulty, to plunge still deeper in absurdity:—according to that admirable logic, by which, as your friends are fain to boast, I am confounded and overwhelmed, and the question as to the constitutionality of your monopoly set for ever at rest, in the case that I have supposed *both the Patent and the State Grant would be valid.*

It is true, they profess to secure to different persons, the same exclusive right of property in the same subject,—the same exclusive privilege of using the same invention;—but in this there is no collision,—no contradiction;—they are both valid and perfectly consistent. I take your own definition of an exclusive right of property, in your own words.—It exists, "when all but one are excluded from the "possession or use of the thing to which the right "extends."* By the terms of the State grant, all but the grantees are excluded from the use of the

* Colden's Vindication, p. 105. It must be seen, that even this definition implies the right of an inventor to use his own invention, and it therefore admits, that *a total interdiction of its use* must operate as a destruction of the right of property. If it should be said, in the true spirit of metaphysical refinement, that the exclusive right of an inventor, that "title" which it is the sole office of his Patent to ascertain, may still remain, because the invention is still his, he is the owner of it, and none other can claim it from him, I answer, what then has he gained by the disclosure of his invention? What benefit does his Patent secure to him?—for, his exclusive right (if thus understood,) was even more secure when the *knowledge of his discovery was confined to his own breast.*

supposed improvement. By the force of the Patent, the same privilege is confined to the inventor, and his assigns. Thus, the same exclusive right is vested in different persons, and *can be exercised by neither.*

Yet, still, the Patent and the Grant are both of them operative and effectual. It is true, the Patentee cannot exercise his "exclusive right" without violating the "exclusive privileges" of the State Monopolists; nor, consequently, without incurring the ruinous penalties, by which those privileges are fenced and guarded. But it is a lamentable error to suppose, that by this prohibition, the "exclusive right" of the inventor is at all affected or impaired:—for, on the other hand, should the Monopolists, in the exercise of the privilege bestowed by their grant, attempt to use his invention, the Patentee by recurring to the Courts of the United States, may effectually punish or restrain them;—and it is thus, that rights seemingly conflicting, are reconciled and protected:—Thus it is, that both the Patent and the Grant are operative and effectual,—effectual, by prohibiting absolutely, the use of the invention they are meant to encourage,—operative, by a reciprocal destruction of the beneficial privileges they profess to confer. It is thus, that the apprehended collision between the powers of the General and State Governments is most happily prevented!—the genius of the inventor receives its appropriate reward, and "the pro-"gress of Science and the Useful Arts" is efficiently promoted!!

You have said, Sir, perhaps truly, that there are many "who cannot stretch their intellects so far as "to associate the idea of property with any thing "that is not tangible or visible." The justice of this

censure as applied to myself, I shall not venture to contest; but, perhaps, I may without vanity suppose, that the "feelings" of many of our readers are as "*obtuse*,"* and their "understandings" as "limited" as my own. Permit me then to illustrate your reasoning, to men thus dull of apprehension, by referring it to a subject with which all are more or less familiar, and with which my studies and practice as "a Country Lawyer," have made me peculiarly conversant.

A valuable and unimproved tract of land is granted and conveyed by two different States to two different persons;—those who have not devoted "five and twenty years of unremitting application" to our laborious profession, might rashly suppose, that only one of these States can have the right or power to grant, and that only one of the Patents can enure to the benefit of the grantee;—but, such an opinion, it is now known, would be eminently absurd, and since the publication of your reply, the mistake, in those who have had the benefit of its perusal, would be quite inexcusable. Each of the States has the exclusive right to grant the same land, and each of the Patentees, under his grant, acquires a perfect and exclusive title. It is true, that neither of them can enter on, use, occupy, or in any manner enjoy the lands which are the subjects of his grant,

* Colden's Vind. p. 19. What these "obtuse feelings" have to do with a pure operation of the intellect, it is a little difficult to conceive. But from the height of his professional eminence, Mr. Colden looks down with contempt on the trifling merits of a pure or correct style. Perhaps some of his "literary and philosophical "associates" might inform him, that the connection between precision and propriety of language, and clearness and force of reasoning, is more intimate than he seems to imagine.

and thus the tract, which it was the intention of both governments should be reclaimed and improved, must for ever remain an uncultivated waste. But, let not ordinary apprehension be startled at the apparent absurdity of this consequence;—let the understandings of the vulgar submit with an unresisting faith to the awful mysteries of the Law!—and let none presume to question a doctrine which "His "Worship the Mayor" has enounced *e cathedra*, merely on the ground, that it is contradictory or unintelligible.

There is no conflict or collision between the rights of these Patentees, and the Patents of both are valid and effectual; for, if either, ignorantly mistaking his rights, shall attempt to enter upon the lands which he claims, and which his patent gives him, the other may punish him by an action of trespass, or drive him off by an ejectment, or the summary process of a forcible entry and detainer!—and then rapidly retreating, restore the lands, to which both have such a perfect and exclusive right—to their original and legal vacancy!—*Do manus Magistro!!* You have told me, Sir, in that syle of peculiar courtesy which marks your "Vindication" that you "have neither the "time nor the inclination to instruct me in the rudi-"ments of my profession."* I will not move the Public, the common tribunal to which we address ourselves, to amend the passage, by inserting *proprio in loco*,—"nor the *ability*;"—for, that you are deficient in this, after the exhibition of powers which your Pamphlet contains, it would be heresy indeed to assert or suspect.

Yet is it evident, that you have no faith yourself, either in the stability of your doctrine, nor in the

* Colden's Vindication, p. 153.

solidity of your fine spun distinctions. You are apprehensive, that your positions are not to be supported, even on *authority*;—for, you know, that you have no authority on which you can pretend to rely, but the reported case of *Livingston* vs. *Van Ingen*, and you are conscious, that there is nothing in that case to aid or countenance your absurdities.

Not satisfied with adopting in your Pamphlet the partial assistance thus afforded to your argument,—you depend on it to strengthen and sustain you at every point of your defence;—and, although you aver, that I have mistaken not only the arguments of the Judges, but the points they have decided,* you have cautiously abstained from noticing those parts of their opinions, which, in accordance with my views of that decision, import, that the State powers can only be legitimately exercised "in harmony with and subordination to "the superior power of Congress."

The utmost that was then contended for, was, that the State had a concurrent power with Congress to reward inventors, by the grant of exclusive privileges. Even the counsel associated with you on that occasion, explicitly admitted in his argument, that "where there "is an actual collision with an Act of Congress, the "State Law must yield;"†—and it was universally conceded from the Bench, that if any person should appear, claiming under a Patent, in hostility to the Privilege granted by this State, "*that* would be a "paramount right, and must prevail."‡ Let me,

* Colden's Vindication, page 102.

† Vide the Reply of Mr. Emmet on behalf of the Appellants, 9 John. Rep. 554.

‡ Opinion of Thompson, Justice, ibid. 567, *vide quoque;* Opinions of Yates, *Justice*, ibid. 561, and of Kent, *C. Justice*, ibid.

therefore, have been never so wrong in my position, that Congress possessed the exclusive power of legislation in regard to the subject then in controversy, I cannot have "mistaken the arguments of the "Judges," when I cited them to shew, that, although the power exercised by the State was held in this case to be concurrent with the power of Congress; yet, that the latter was acknowledged in case of actual collision to be the paramount and prevalent authority.

Neither, Sir, is it possible that you can have mistaken the point then decided. The artifice to which you resort, in answer to my appeal to the unpublished opinion of Judge Van Ness, shews that you did not. You observe that I had stated "the reasons "assigned by Mr. Justice Van Ness, to be stronger "on one point than those of the other Judges."* Why not specify the point as I had done? Why go on gravely to *infer* that I meant to "say the opinion of "the learned Judge was much more decisively, in "some respects, in favour of that side of the ques- "tion which I was so zealously labouring to main- "tain;"—when I had positively and distinctly alleged it to be stronger, and much more decisive and full, in admitting "that the State powers could only "be exercised in harmony with, and in subordination to, the powers of Congress."† Why, Sir, sup-

582. In regard to the latter opinion, I know it will be objected, that it is qualified, if not absolutely revoked by *a marginal note*. But that note formed no part of the opinion judicially delivered in the Court of Errors. It was added subsequently, *at the suggestion and request of Chancellor Livingston.*

* Colden's Vindication, p. 136.

† *Vide* Letter to Colden, pp. 39,-40.

press the explanation, unless you had studied to conceal whatever had fallen from the Bench, adverse to your doctrine, and had designed to wrest its decision to the defence of a principle, which it had distinctly negatived and disavowed.*

It is clear, then, from a reference to that case, which you "trust every man *interested* in judging on "this important question, will attentively consider" that the Court there decided that the grant to Messrs. Livingston and Fulton, was not absolutely void upon two grounds only.—"1st. That consider- "ing those gentlemen as inventors, the State had a "concurrent right with Congress, to reward them "by the grant of an exclusive privilege in their in- "vention." 2dly. "That considering them not as in- "ventors, but merely as the possessors and import- "ers of a foreign invention, the State had an indepen- "dent power of Legislation in regard to them; and "'*no doubt*' was entertained that if the Respondents "in that case could have claimed a right by Patent "as inventors, they would have prevailed in the

* A protest is solemnly entered against this attempt to put "the "weight of Judge Van Ness's high judicial character" on my side,—and as "the official reporter of his own court," (meaning, I presume, the Court of Errors,) says no more than that he "concurred in "the opinion delivered by Judge Yates;"—it is taken for granted "that my statement in regard to the opinion of the former, "must necessarily be unfounded, particularly as I do not pro- "fess to assert it of my own knowledge, and as it is improba- "ble that Judge Van Ness would have left the error," (what error, pray?) "to be corrected by me." But does my antagonist suppose that no person heard the opinions of the Judges, which were delivered in open Court, except the Reporter? Has Judge Van Ness authorised a contradiction of my statement, and *would it not have been contradicted, if his authority could have been obtained?*

"controversy, and the State Law have given way "to the superior power of Congress."*

This simple admission, Sir, would have been sufficient for every purpose of my argument, and on this single point might I have rested the defence of the Committee, had I chosen to shrink from every other branch of the discussion. Mr. Ogden claimed under a Patent, and the Bill reported for his relief was in perfect harmony with the principles thus recognised by the Court of Errors. But the various grounds upon which he urged the interposition of the Legislature, and the course of argument by which they were supported, opened more extensive views of the subject than had been presented to the Courts, in the case of *Livingston* vs. *Van Ingen.*

That case, it will be recollected, was carried up on an appeal from an interlocutory order of the Chancellor, by which an injunction had been denied to the Appellants upon exhibiting their Bill. No answer had been filed in the Court below, by the Respondents, and they shewed no right or title, nor alleged any matters of defence whatever on the Record. The points, therefore, which were raised for consideration, upon the Appeal, are reducible to these:—1st. Whether the grant to Messrs. Livingston and Fulton, was absolutely void, as made in contravention of the constitutional power of Congress;—and, 2d, Whether the Appellants, were entitled, at Common Law, to the remedy by injunction in the first instance, in addition to the particular forfeiture and remedy given to them by the Statute?

Both these questions were determined affirmatively, in favour of the Appellants:—the first upon

* Vide 9 Johns. Rep. 561.

the grounds which I have stated; and although you assert that it was decided that the Law of 1798 "was not invalid, notwithstanding it was passed be- "fore the term limited for Fitch's exclusive right "had expired;"* no objection was ever taken to it on that ground. Nor from the nature and form of the proceedings, could any question be raised against the validity of the State grant, either on the ground of its having been obtained upon false suggestions,—of its interference with the rights acquired by Fitch, under his Patent,—of its excluding the use of his principle of Steam navigation, after it had become the common property of all the citizens of the Union,—or of its extending over the intermediate waters between this and another State. And so far from a Patent's being set up in defence, by the Respondents, for aught that appeared, their mode of applying the Steam engine to propel their boats, was the very same which had been introduced by the Appellants. Could the former, however, have claimed title as for a new invention, or useful improvement, secured to them, as such, by Patent under the authority of Congress, it is clear that the Court, instead of ordering a perpetual injunction to interdict its use, must, upon its own principles, have affirmed the Chancellor's decree.

In Mr. Ogden's case, all the points above enumerated, were urged before the Committee; and in presenting them to the consideration of the House, it became their duty to express those opinions which drew forth that intemperate censure of their Report, which adorns, and, in the end, has served to

* Colden's Vindication, p. 149.

illustrate "The Biography" of Mr. Fulton. In the performance of this duty, it is true that the Committee found themselves compelled to differ, in some respects, from the opinions delivered in the Court of Errors; and however prone they might have been, as Lawyers, to submit their minds to the control of book authority;* however well disposed as individuals, to surrender their judgments to the correction of superior wisdom;—the conscientious exercise of their offices, forbad them. I have endeavoured, however, to defend their doctrines from your Literary and Philosophical Strictures, by a full developement of the principles and reasonings upon which those doctrines were founded,—and I shall submit with cheerfulness to the decision of that impartial and enlightened public, to which you, Sir, were the first, on this occasion, to appeal.

As you permitted that part of the Report, which relates to the power vested in Congress, to regulate Commerce, to escape vituperation in your Memoir, I did not, in my former Letter, urge the objection to the State grant, which had been founded on that article of the Constitution;—neither did I "put it forth," as you assert "with great confidence;" nor did I, except in my summary of Mr. Ogden's argument, allude to it at all;—and even there I cannot admit that it "stands "prominently conspicuous."

You have, nevertheless, thought it expedient, to revive the question,—and notwithstanding you reproach me with "having transferred to the pages of my Letter," arguments which had been urged by

* Colden's Vindication, p. 39.

others,* you transcribe at length the opinions given, upon this point, by the Judges,† without adverting to a circumstance which distinguishes the case of the Respondents, in the Court of Errors, from the claim of the Memorialist before the Legislature.—You omit to notice that the latter entered our waters with his boat, from the waters of an adjoining State, upon his ancient and accustomed ferry,—over waters intermediate, and common to both States, and under the sanction of a coasting license, issued in virtue of the Revenue Laws of Congress, by the officers of a different collection district.—Whilst the former merely navigated from one point to another, over our own waters,—not upon a ferry, but within the same Revenue District, as well as within the same State jurisdiction.

As you have neither remarked this difference, nor attempted to answer the case put by Van Ingen's Counsel, of a foreign Steam boat entering the waters of this State, under the Regulations of Congress,—the Law of Nations,—and the faith of Treaties;—and as it is sufficient for me, upon other grounds, to have shewn the unconstitutionality of the State grant,—I shall detain you no longer upon the point,

* Whether I owe most of my ideas to the arguments of the Re-"spondents' Counsel," in the case adjudged in the Court of Errors, may be easily ascertained by referring to the Report of that case, in Johnson. So far as any coincidences may be found to exist, I shall be proud to acknowledge the support of such respectable opinions. Unfortunately, however, the obligation cannot be very extensive, inasmuch as the arguments of Messrs. Wells and Henry, embrace but one of the many points discussed in my Letter.

† Colden's Vindication, p. 126.

than to inquire, whether that grant does not directly interfere with the acts passed by Congress in virtue of their power "to regulate Commerce with foreign "nations amongst the several States;"* and to suggest that the quarantine Laws, and the acts granting Ferries, and establishing Turnpike roads and Toll bridges, can avail you as little, in answer to this objection, as upon any former occasion.

It may be proper, however, merely to observe, that a State law may interfere with the provisions of the power to regulate Commerce, either when it proposes such regulations, as its end or object,—or when, in its natural effects and consequences, it interferes with that Power, which, in regard to the objects specified, is admitted to be necessarily exclusive. Quarantine Laws, undoubtedly, affect the intercourse of foreign nations with particular States, or of one State with another,—but the object and end of those Laws is not to regulate Commerce, but to guard against infectious diseases,—it is only by accident, and not in their natural results, that they regulate Commerce, or interfere with its regulation. Neither do the acts for granting Ferries, Turnpike roads, or Toll bridges, aim to regulate Commerce.—That is not their end or object,—nor can they, in their natural results, be said to interfere with the power of Congress: and if, in any wise, they do interfere with it, it is *perchance*.

The object of the grants in question, is to promote easy and expeditious internal intercourse, and their accidental effects may be to *facilitate* commercial intercourse. The exclusive privileges given in

* Constitution U. S. Art. 1. Sect. 8.

these cases, to the grantees, were given to promote the end of the grant,—and are the means which the Legislature thought it most proper to resort to for taxing the public, in order to attain the object. It is from confounding the natural result with the accidental effects of a Law, that the fallacy has arisen;—by distinguishing the one from the other, we are guarded against the possibility of delusion. In truth, the accidental effects of every Law for the regulation of trade, or the imposition of taxes on articles of home consumption, and for the inspection of those of domestic growth or manufacture,—may, in the same loose and extended sense, be said to be regulations of Commerce,—because they affect it indirectly. But how different are such Laws in their aim and consequence, from a grant that directly, in its natural result, and by a foreseen consequence, monopolizes one grand method for the cheap and expeditious prosecution both of foreign and domestic Trade?

But although the Committee ventured thus to differ from the authority upon which you repose,—although they believed the grant to Messrs. Livingston and Fulton, contradictory and repugnant to the powers vested in the General Government, for the regulation of Commerce, as well as those given to it for promoting the progress of Science and the useful Arts,—yet they recommended no interpretation of the Constitution at variance with the principles of the Court of Errors. On the contrary, the measure, which, in the first instance, they proposed, was founded upon the judicial construction which had there been given to the State Monopoly.

The Court had held the grant to be valid, on the ground of a concurrent, but subordinate power in the State Legislature,—and acknowledged, that in case of conflict, a Patent right would prevail against it. This doctrine had even been admitted by the grantees themselves,—and so well aware were they of its soundness, that, pending the controversy, they procured from the Legislature in 1811, that additional Statute, by which, in case of any future violation, real or imaginary, of their right—the remedy was placed in their own hands, and the Court of Chancery deprived of all legal discretion, as to the granting or refusing an injunction.

This process was directed by the act in question, peremptorily to be issued upon the filing of a Bill, in order to prevent the removal of any Steam boat, seized for navigating without the license of the State grantees, to any other place than that which should be directed for its safe keeping during the pendency of any suit which they should think proper to commence.* And as the boats belonging to Van Ingen and his associates, were specially exempted from the operation of this act, it is by no means difficult to account for their acquiescence in the measure. During the continuance of the controversy, it admitted them to an undisturbed participation in the Monopoly; and it secured to them, whatever they might obtain in the way of compromise or treaty, free from all hazard of interruption from subsequent intruders. The very circumstance of such an exception, proves, Sir, in contradiction to your opinion, that this act of 1811, was never intended to

* Vide Letter to Colden, Appendix H.

operate as a Legislative confirmation of the grant, although it may have been intended as a *Legislative prejudgment of all subsequent cases.*

Notwithstanding it was agreed by the Judges, that the State grant was taken subject to the power of Congress, it was clear to the apprehensions of the Committee, that the extraordinary remedies thus given to protect the grantees, might, at their pleasure, be applied to cases neither contemplated by the Legislature, nor comprehended within the decision of the Court of Errors. In strict conformity, therefore, with the principles recognised in that decision, the Committee recommended a new Law, declaring that nothing in the several acts theretofore passed, concerning Steam boats, "should be so con-"strued as to affect the right which any person "might have to use the invention of the Steam boat, "or any improvement thereon, which had been, or "thereafter might be Patented, under the Constitu-"tion and Laws of the United States: *Provided*, "that they did not interfere with any invention or "improvement secured by any of the acts above "mentioned."*

This proposed Law, you declared, Sir, in your "Life of Fulton," "to be in effect an entire repeal "of the exclusive grants of Messrs. Livingston and "Fulton,"†—and it did appear to me that you meant to support your position, by the suppression of one important word in the *proviso* to the first section of that Bill; for I was at a loss to divine what other colourable pretext could be found for your opinion. I endeavoured, therefore, in my Letter, to expose,

* Vide Letter to Colden, Appendix L. † Life of Fulton, p. 245.

the artifice, and fancied that I had succeeded ;—but the ingenuity of an experienced advocate in his own cause, is not easily subdued. You repeat the assertion in your pamphlet, but endeavour to sustain it by new arguments, and on different grounds. You now allege that "the first clause of the "section gives a right to use on the waters of this "State, notwithstanding the Laws passed in favour of "Messrs. Livingston and Fulton, the invention of the "Steam boat, or any improvements which were then "or might thereafter be Patented."*

But is this a repeal of the whole grant? Does it not leave the rights and remedies of Messrs. Livingston and Fulton, precisely where it found them, except in cases where they conflict with the rights of Patentees? Is there any thing more in the clause than an adoption by the Legislature, of that very construction of the State grant which had been admitted by the Counsel of Livingston and Fulton, and sanctioned by the Court of Errors? I admit that if the Law stood without the proviso, a Patentee might run a Boat on the waters of this State, notwithstanding its exclusive grant,—but I deny, Sir, that in virtue of such a law any other than a Patentee under the paramount authority of Congress, could have infringed upon it.

The argument by which you attempt to prove your assertion to the contrary, involves a petition of the question, and, once more, assumes in direct contradiction to the case of *Livingston* and *Van Ingen*, that the State grant must prevail over the right of a Patentee. Besides, there is a peculiar inconsistency in such an objection, Sir, from you :—It is a point upon which, (if

* Vide Colden's Vind. p. 160.

I may be permitted the use of "technical language,") you were *estopped;* for, you had admitted expressly, that "if the law of 1798, were against the Constitu- "tion of the United States; if the State had no pow- "er to pass the Law, it was void, and that the Le- "gislature had power to declare it so."*

Now, this Sir, is admitting much more than I ever did, or ever shall contend for. Confident as I am, that the State grant is unconstitutional and void, I never shall allow, that "the Legislature have "power, consistent with its faith and honour, (and this, Sir, is the only power of which I speak,) to de- "clare it so." It is not for them to avoid their own grant, upon an allegation of their own defective jurisdiction or authority. The unconstitutionality of that grant is a judicial question, to be decided according to the rules and forms of the Law,—in the mode—established by the Constitution and prescribed by the Act of Congress. The utmost extent of my efforts, was to prove the necessity of a Legislative declaration, to prevent the grantees of the State from extending their special remedies beyond the acknowledged limits of the State authority. With whatever plausibility, therefore, (setting aside all regard to consistency,) you may have urged the propriety or expediency of protecting the representatives of Messrs. Livingston and Fulton from all future litigation, in defence of rights judicially settled in their favour; the argument can have no force or application in regard to those matters of controversy, which have never been judicially considered: much less can it justify the suppression of all future investi-

* Colden's Vind. p. 98.

gation of that objection to their title, which in the only case which has arisen in respect to it, had been admitted to be valid.

But as the distinction taken by the Court of Errors in favour of Patentees, was not a point adjudicated, the Committee added the proviso to their Bill, with the view, that every question which could arise in case of future conflict between the State Monopolists and the authority of Congress, should be reserved for decision in the ordinary Courts; and had that Bill become a Law, its effect would have been no more than to have opened the avenues to justice, to persons invested with privileges secured (or at least intended to have been secured,) to them, by the Supreme Law of the Land. In case of the intrusion of a Patentee, the representatives of Messrs. Livingston and Fulton might still have availed themselves of every mode of redress at Common Law, and every Statute remedy which they possessed anterior to, and independent of, the Act of 1811; and if the validity of their right were questioned by any other than a Patentee, they would have yet had at their command those very means of suppressing the inquiry with which that act had armed them.

You deny, however, that "this *Proviso* can operate "to reserve any thing; because none of the acts passed in favour of Messrs. Livingston and Fulton pre-"tend to secure any invention or improvement;"* and aver, that "there is not the least reference to in-"vention or improvement in them;" but, that "they "give the exclusive grant merely on the ground of Mr. "Livingston's having undertaken to establish Steam-

* Colden's Vind. p. 161.

" Boats, that would go at a certain velocity, without " considering whether the effect was to be produced " by his own invention or improvement, or that of " any other person."*

Neither, Sir, did the *Proviso* " consider," whether the invention or improvement secured to Messrs. Livingston and Fulton, was their own, or that of any other person. The terms were used in reference to the subject matter of the former Laws, and were intended to describe that mode of propelling boats by Steam, of which those gentlemen had when they obtained their grant, represented themselves to be "possessors." On that occasion, they had alleged, their principles to be " new and advantage- " ous ;"—this was the ground upon which the exclusive grant was given to them, and the Committee, therefore, presumed, that a plan founded upon such principles, must have been either an " invention" or an " improvement" of some person's or other, if not of Messrs. Livingston's and Fulton's.

But if the Committee were mistaken; if that mode of propelling boats by Steam upon new and advantageous principles, of which Messrs. Livingston and Fulton were " the possessors;" when, in consequence of such representation of it, they were invested with their exclusive privileges, was not in fact " an " invention or an improvement," either of their own, or of any other person's—what was it then? What, Sir, was actually secured to them by the former acts? and how would you have described the subject matter of their grant? If any more apt description could have been suggested by yourself, or any advocate of Messrs. Livingston and Fulton upon the floor of the

* Colden's Vindication, p. 162.

Assembly, I undertake to say, that the Committee would have adopted it. They would have had no objection, if it could have afforded you the least gratification, to have inserted in their Bill, the whole periphrasis, from the Preamble of the Act of 1798, and so to have amended the Proviso, that it should have read, "*Provided always*, that in such case, they do not in- "terfere with *any mode of propelling boats by means of* "*Steam or Fire, lawfully secured by the acts above men-* "*tioned, or any of them.*"

But it is clear from what you have advanced, that no modification that human ingenuity could have devised, would have been acceded to. Nothing short of the absolute and uncontrollable possession of the means still in the power of the State grantees, for preventing all future examination of their right,—could have contented them. From this circumstance alone, then, there appears something disingenuous in your objecting to the Reported Bill, on the ground of its absolute repeal of the laws antecedently existing; but, when you knew that it had been withdrawn by the Committee, without having been acted upon in the House, and another substituted by them in its stead, for the express purpose of obviating your objection, when you were conscious, that the suppression in your Memoir of these circumstances, had been detected and exposed, the persevering artifice by which you still hope to conceal them, must provoke the indignation as well as the contempt of all who value the simplicity of truth.

Let any man ignorant of those circumstances peruse the statement in your "Life of Fulton,"—of the proceedings in the Legislature,—or, the remarks in your "Vindication," on the Bill first reported by the

Committee, and say, whether he can discover, that another bill had been submitted to the actual consideration of the House, and the recommendations of the Committee eventually confined to the repeal of the cumulative remedies which had been given to protect Messrs. Livingston and Fulton in the enjoyment of their grant. If he cannot perceive this, Sir, the deception is complete; for such you knew to be the fact.

This substitution of the one Bill for the other, was not the result of any alteration of sentiment in the Committee, much less was it produced by a subsequent conviction, that the bill first recommended was objectionable in principle. It was made, Sir, in the spirit of accommodation, to meet the views of several intelligent and active members of the Assembly, who, whilst they were anxious that every question touching the validity of the State grant should be fairly investigated upon a trial at Law or in Equity, were nevertheless desirous to leave the grantees in the undisturbed possession of the Common Law remedies, to which they are entitled, independently of the forfeiture created by the Act of 1808.

Not, Sir, that it was imagined, that if Messrs. Livingston and Fulton could have relied on their *Patents*, they would in effect have been deprived of those Common Law remedies in any case. If Mr. Fulton were indeed the inventor of the combinations and improvements secured to him as his own inventions, under the Constitution and Laws of the United States, he would, in case of a violation of his Patent-rights, have been entitled according to the doctrine of the Court of Errors, to an injunction from the Fe-

deral Courts, had the proposed Law been passed.—But those to whom I have reference, had no greater confidence in the stability of Mr. Fulton's Patent, than Mr. Fulton appeared to have himself; and after hearing the argument at the bar of the House, they suggested a general repeal of the cumulative remedies, by which means, in a case like that of Mr. Ogden's, the question arising under the power of Congress to regulate Commerce, and many others, besides the single point respecting the Constitutional power of securing to Authors and Inventors the exclusive right to their writings and discoveries, would be open to discussion in the Courts below; whilst Messrs. Livingston and Fulton might still have recourse to an injunction at Common Law, to be issued in the first instance against a rival Patentee, if the Chancellor in the exercise of his discretion, should think proper to grant one.

Such then was the measure which I asserted the Legislature had the power to adopt,—a power, arising, not as you suppose, from the mere arbitrary *fiat* of their will, but a power, as I was careful to express it, "consistent with the faith, honour, and jus-"tice of the State." That the Legislature had such power of interference, in regard to the *remedies*, was universally admitted in all the discussions which had taken place concerning it. The only doubt was, whether the forfeiture given by the Act of 1808, could be considered part of the *right* vested in Messrs. Livingston and Fulton, or together with the subsequent provisions of the Act of 1811, constituted a portion of the *remedy*. Indeed, the friends of Mr. Fulton had even expressed a willingness to concur in the passing of the substituted Bill, if the clause relating to the

forfeiture had been stricken out, and Mr. Fulton himself, would have stipulated for a repealing clause, restricted in its operation to the latter Act.

I did not, therefore, conceive it necessary in my former letter, to enter upon a regular course of argument to prove this conceded point. I merely directed your attention to the several Statutes giving the remedies in question. I appealed to the reasoning of your associate Counsel, and the opinions of the Judges in the Court of Errors, to shew, that it had been settled beyond controversy, that this forfeiture was a "cumulative remedy," and not any part of the "right antecedently existing;"* and I ventured to presume, that it would not in any other case have been pretended, that the Legislature could not, without a violation of the public faith, *alter, modify or repeal, the remedies given for the maintainance of any vested right whatever, provided the party entitled to it were left in the possession of adequate means to defend and enforce its lawful exercise and enjoyment.*

I referred to the Law of Landlord and Tenant, not so much, Sir, for legal authority to support this position, as for an illustration to render it more plain; and in an argument upon a juridical subject, addressed to a Lawyer of great practical experience, I thought, I should have been as pardonable in the use of "technical language," as if he had already been elevated to the *quorum*, and had actually felt the dignity of presiding at the General Sessions of the Peace. But the "professional jargon" of my Letter, seems no less offensive to your peculiar taste, than the oc-

* Vide Letter to Colden, page 76, and 9 Johns. Rep. 557. and 571.

casional introduction of a passage from the Classics.* In utter despair, therefore, of satisfying a fastidiousness so contradictory and capricious, I must persevere in thinking an appeal to the numerous Statutes varying and curtailing the remedy by *Distress*, although the subjects of that remedy are regarded by the Law, in the light of pledges given by the tenant for the faithful performance of the contract on his part, not altogether "irrelevant."

You allow, nevertheless, that "no claim upon "public faith can be urged against the modification "of *general remedies* erected only with a view to ge-"neral policy and expediency, and in no respect sti-"pulated for in the bargains made between con-"tracting parties;"† but you insist, that "the case "is very different, where the Legislature establishes "particular remedies to secure and protect the "rights acquired by individuals, in virtue of a spe-"cial agreement with the State."‡ You have not, indeed, condescended to point out wherein that difference consists, nor to shew, that the remedies form any part of that contract, the existence of which you again assume: for here, as in many former instances, you consult your own convenience in preference to the rules of a vexatious dialectic, and very prudently take that for granted, which it was the business of your argument to prove.

If any special agreement, however, did at any time exist between the State and Messrs. Livingston and Fulton, the terms and conditions of it had been mu-

* Vide Colden's Vindication, p. 144.

† Vide ibid. p. 145.

‡ Vide ibid. p. 153.

tually executed, long before the cumulative remedies were devised. Before the Act of 1808 had declared every unlicensed Steam-Boat forfeited to their use, the precedent condition on their part had been performed. Their right had consequently vested, and every public object of the grant was accomplished. When their title to that exclusive privilege had thus been perfected, and when, to enable Messrs. Livingston and Fulton to reap the full reward of their perseverance, it had become necessary for them to establish additional passage boats upon the Hudson, they obtained by this Act of 1808, besides the forfeiture in question, an extension of their grant without any pretence of consideration.

Although the inducement held forth, was the performance of a condition, which, if they intended to avail themselves of the effectual benefit of their grant, they must necessarily have complied with;—yet, there was nothing in the new Law to bind them to its execution. The only consequence then, of their omitting to employ new boats in addition to the boat then in operation, would have been, their being left, except as to the forfeiture, precisely where they were before the Act had passed. They obtained that forfeiture, therefore, distinct from and independent of either the original grant or the subsequent conditional extension of it;—it forms no part of their *contract*, if contract that may be called, which bound them to nothing,—which, neither bound them in the first instance to establish any boat whatever, unless upon complying with a prescribed condition, they had *chosen* so to do, nor rendered it subsequently obligatory on them to increase the number of their

boats, if they were willing to forego the certain advantage resulting from that measure.

Still less have they any colourable pretext for claiming the additional provisions of the Act of 1811, as a part of their "bargain:"—for, on your own principles, those remedies were purely gratuitous. No alteration or enlargement of the original term was comprised in this last Law, nor was any thing else contained in it besides an extension of the forfeiture given by the preceding Act, with new remedies to enforce it, and a new regulation for depriving the Court of Chancery of all legal discretion as to issuing an injunction, or permitting its dissolution upon terms.

The whole of these cumulative remedies were indeed obtained, from the mere favour of the Legislature;—they were all taken subject to its control, and are now held at its discretion. The only remaining ground, therefore, for objecting to their repeal, must be, either that the State grantees would in that case be deprived of all means of enforcing their rights, or that the remedies left at their command, would be inadequate to the purpose.

Now, we have seen from the decision of the Court of Errors, that, independent of all the remedies created by the Statutes, the representatives of Messrs. Livingston and Fulton, might obtain a writ of injunction at Common Law, against the owners of any Steam-Boat attempting to navigate the waters within our jurisdiction in opposition to their rights,—which injunction would be issued upon the filing of a bill,—continued pending the controversy, and rendered perpetual, should that controversy terminate in their favour. Besides, they would, at Common Law, re-

cover such damages as they might actually have sustained, for an infringement upon their Monopoly,—to be assessed by a Jury in a special action on the case. It will hardly be pretended, that these remedies are insufficient to defend and enforce the lawful exercise and enjoyment of the Right,—*unless that Right is for the future to be, as you maintain, exempt from all judicial scrutiny!*

Yes, Sir, it is even this for which you are driven to contend! Although the Judgment of the State Court is not final and conclusive upon the question of constitutionality;—although all the objections to the validity of the Monopoly did not arise, and from the nature and form of the proceedings in the case of Livingston and Van Ingen, could not have been taken in the Court of Errors;—although your own Counsel as well as the Judges, did there admit, that in the event of collision, a Patent-right must prevail over your exclusive privilege, and the State Law yield to the paramount authority of Congress;—yet, you do not hesitate to deny, "that Justice requires, that the "Legislature *should again open the door of litigation*,"—*even to a* PATENTEE. It is thus, Sir, that in confirmation of the remark with which I closed my former Letter, you openly acknowledge, that "not only the "the rights of Patentees, but the common rights of "our Citizens; not only the ordinary rules of Jus-"tice, but the fundamental principles of our govern-"ment are prostituted and sacrificed, that your Mo-"nopoly may be guarded."

A forfeiture of the nature of that created by the Act of 1808, is of itself, as I before urged, repugnant to the spirit of that article of our Bill of Rights, which, in the language of the Great Charter,—de

clares, that "every amerciament shall be according "to the quantity of the trespass;"* and the provisions of the subsequent Act for enforcing that forfeiture, are, I repeat it, in direct violation of the same fundamental Statute. The Law which gives the forfeiture, gives to the grantees of the Monopoly, an absolute property in any boat propelled by Steam or Fire, which shall attempt to navigate our waters without their license,—although the actual damage sustained from the intrusion should be literally—nothing!

In your Reply, it has suited you to blend the consideration of my objections to this Act, with those which I had urged against the other, and to represent me as having stated the forfeiture itself, as well as the Act for enforcing it, to be infringements upon the *letter* of the Bill of Rights."† Alluding of course to the article first quoted from it, without pretending to answer the objection I had founded upon the second, you assert generally, that the "provisions "cited from Magna Charta, relate to the administra- "tion of Criminal Justice,—to the infliction of dis- "cretionary amercements,—and the arbitrary pu- "nishment of offences." You thought it decorous on this occasion, to refer me for correction to my "*Blackstone;*"—permit me, Sir, in return, to send you back to "The Institutes;" and, if you can tolerate the quaint learning and "technical jar- "gon" of Lord Coke, you may learn, that the declaration, now in question, is *expressly confined to amerciaments in civil suits, and that neither fines nor*

* Vide Letter to Colden, page 73.

† Vide Colden's Vindication, p. 157.

*amerciaments in criminal prosecutions, are within either its words or meaning.**

You may learn too, if you will condescend still further to consult a "black letter Lawyer," that not only are all Monopolies held to be contrary to the provisions of *Magna Charta*, "because they are against "the liberty and freedom of the subject;"†—but that the identical article last quoted by me from that instrument, as adopted in our Bill of Rights, has been declared to extend to the preservation of "the "freedom of trade."‡

You assert, however, that the provisions contained in the act of 1811, do not fall within the prohibition of the Bill of Rights, nor authorize the State grantees to take possession of an unlicensed Boat, "*manu forti*, without execution, without judgment, "without trial, and without process;"—because they are not expressly enabled to seize it in the same manner as if it had been *feloniously* taken from them in the first instance;—although the act gives to them the same remedies for the recovery of such forfeited Boat, as if the same had been *tortiously* or *wrongfully* taken out of their possession.§

But in acquiring "the rudiments of my profes-"sion," Sir, I had not the benefit of your "instruc-"tions," and was taught to include *felonies*, as well as every other species of crimes and misdemeanors, under the general head of "*Public Wrongs:*" —and, I must confess, I thought the arrangement philosophical and rational, inasmuch as I had pre-

* 2d Just. ch. 14. fo. 27. and Griesly's Case, 8 Rep. 75.
† Ibid. ch. 29. fo. 47. ‡ Ibid. and 1 P. Williams, 181.
§ Vide Colden's Vindication, p. 152.

viously learnt from my Ethics, not only that it was *wrong* to commit a crime, but that theft, accompanied with violence, had usually been deemed an atrocious one. Your distinction, therefore, between a *felonious* and a *wrongful* taking, in some measure reconciles me to the disadvantages under which I labour from the want of your early lessons in *Morality*, as well as in the Law.

Besides, I was somewhat at a loss to conceive what the Legislature could have meant by the word "*wrongfully*," if it were not introduced into the Statute for the express purpose of supporting that very construction of which I insist it is susceptible. The word "*tortiously*," alone would have comprised within its signification, every description of *Civil Injury*, of which a chattel can be the subject. Indeed, there could have been no reason nor necessity for such legislative provisions at all, if Messrs. Livingston and Fulton had not intended to acquire the power of seizing and detaining a hostile boat by force. The forfeiture of a boat, navigating without their license, having already been vested in them by the act of 1808, every Common Law remedy for recovering its possession, followed as a necessary consequence. Those remedies, however, though proved sufficient for the protection of their rights, were not found adequate to their pretentions. "It "was perceived," as you tell us, "that without a "*summary remedy*, these grants would not only "be unavailing, but ruinous to them;"—and an "enlightened and liberal Legislature, *therefore*, "passed the Law of 1811, to make the forfeiture "effectual *as to the object intended.*"*

* Vide Colden's Vind. p. 152.

But what was "the object intended?" What else could it have been than to enable the grantees of the Monopoly effectually to exclude Patentees, under the authority of Congress, from the benefit of that distinction, which, if not admitted as an exception in their favour, had, so far from being adjudicated against them, at least been reserved for future judicial consideration. You ask, Sir, if "it was not *just* that the State should give "that summary remedy* against those strangers, "who, if they have really invented any thing new, "have, in virtue of their Patent, a Monopoly of all "the waters of the United States, except as to the "small portions of them which have been granted by "some of the States.†" To this, I answer, in the first place, if you designate as "strangers," inhabitants of other States of the Union, the Federal Constitution declares that "The citizens of each State shall be "entitled to all privileges and immunities of citi-"zens in the several States.‡" And further;—some of the very persons to whom you allude were citizens of our own State, and their cases were infinitely the most desperate,—for those Patentees, who are citizens of other States, may, in the first instance, seek redress against violence from the State Monopolists, in the Federal Courts; to which our own citizens could have access only in the last resort. But I answer, secondly, that the merits§ of these

* Vide Colden's Vind. p. 153. † Ibid. p. 158.

‡ Constitution U. S. Art. 4. Sec. 2.

§ The Petitioners to the Legislature, in 1817, to whom Mr. Colden alludes, were *Joseph Hawkins*, a citizen of the State of New-York, and *John L. Sullivan*, Esquire, of Boston, a son of a late Governor of Massachusetts. The former I never knew. The

persons, as inventors, are irrelevant to the question. —Whether they had " really invented any thing " new," might become one of the subjects of judicial

first time I ever saw him was in the lobby of the Assembly Chamber, which he frequented whilst his application was depending; nor do I recollect ever having seen him since. He had been represented to me as a ingenious but unfortunate projector, who had obtained a Patent for some improvement in Steam Navigation, which I presumed might, or might not be important. To me it was indifferent which, as I conceived he had, in either case, an equal right to be heard;—and I supported his claim the more readily, inasmuch as it was seconded by a strong representation from the " Merchants and Traders of the city of Albany,"—and because the subject happened to be familiar to me. The Petition of Mr. Sullivan was not presented to the House until after a Bill, reported for the relief of Hawkins, had been fully debated. The former had, indeed, as he informed me, repaired to Albany in consequence of the favourable Report upon Hawkins's Petition. He brought with him introductory letters from several gentlemen of the first respectability in New-York and Boston,—and amongst them, one to me, which represented him to be an equally ingenious and estimable man. It would seem from Mr. Colden's representations, (*Vindication*, pp. 4, and 157.) that I had spoken of the claims of both Sullivan and Hawkins, as resting upon peculiarly formidable grounds;—than which nothing can be more deceptive, as my assertion was confined expressly to the application of the former, and was warranted by the facts set forth in his Petition, and proved by documents produced in its support. From these, documents, (which will be found in the Appendix,) it appeared that Mr. Fulton, ignorant, no doubt, of Hulls' project, which you have called up in judgment against him, had himself conclusively admitted both the importance and the originality " of the *Steam Tow Boat.*"—That he had claimed it as his own invention, and as such, had solicited for it a new Patent, distinct from those he had previously obtained;—and that, on this occasion, the right, after formal litigation, had been judicially awarded to Mr. Sullivan. The latter gentleman is, however, severely censured for making his application to our Legislature, " when he " was himself in possession of an exclusive grant to navigate the

inquiry, and so long as their respective rights are confirmed by Patent, they are equally entitled to a fair trial of their rights to use the invention secured to them under the Constitution and Laws of the United States, whether those inventions possess the transcendant merit which you imagine to have been attainable only by your deceased "friend," or are as worthless as that Patented discovery of your own,

"waters of *one of the rivers* of the Commonwealth of Massachu-
"setts, with his *Tow Boats*, precisely similar to that of Messrs.
"Livingston and Fulton." But how can a privilege, limited in its exercise, to a particular river, and confined to the use by the *Inventor* of his Patent invention, be precisely similar to the exclusive right of Messrs. Livingston and Fulton, to navigate *all the waters* within the jurisdiction of this State, *whether of their own invention or of another's;—whether already known or afterwards to be discovered.* The Law set forth by Mr. Colden, in the Appendix to his "Vindication," merely invests Mr. Sullivan with the exclusive right to that portion of Connecticut River which is within the jurisdiction of Massachusetts, for the use of his *Patent Steam Tow Boat*, and the improvements he may make thereon, for the space of twenty-eight years, being double the time allowed by the Patent Laws of the United States, *from and after the expiration of his said Patent.* This law is, nevertheless, at variance with the Constitution of the United States. It interferes with the exclusive power of Legislation vested in Congress in regard to the subject; but not by any means to the same extent and degree as the grant from this State to Livingston and Fulton. The practical difference between them is this,—that whilst the latter took effect immediately upon the performance of the condition precedent annexed to it, and is protected by unconstitutional penalties from judicial investigation. The right vested in the grantee of the State of Massachusetts, does not take effect even upon the performance of a similar condition, until after the expiration of the term secured by his Patent, and is sanctioned by no forfeitures and penalties, but those to which he may be entitled at Common Law. *Vide* Colden's Vind. p. 158. Appendix to do. p. 167, and Appendix K, and L. *infra.*

to give effect to which, you candidly acknowledge, your "reliance upon the aid of *Hercules*."* Again, Sir.—How can the Patents of these claimants secure to them a Monopoly of all or any of the waters of the United States, if the States separately have power, as you contend, to secure the exclusive use of those waters to another? How can those Patentees enjoy the rights actually intended to be secured to them, if a State may, in defiance of the paramount Law of the land, prohibit the use of their inventions within its jurisdiction, by penalties defensible upon no other principles than those which justify the defence of usurpation by the oppression of the People, and rebellion against the Government?

Conscious that you have neither reason nor *authority* to support your cause, your last sad refuge is a mendicant appeal to the compassion of the Public, in favour of what you are fain to represent a *losing bargain;* and to render the recital of your own disappointments more touching, you magnanimously "offer to sell your whole interest in the North River "Steam boats, to any one acceptable to the rest of "the company, who will give you your principal and "interest from the time you advanced the capital."† That is, you propose to retain the surplus profit, get back your investment, with lawful interest, and quit, what you conceive, an unsafe, rather than an unprofitable concern. An offer that reflects at least as much credit upon you prudence, as upon your generosity.

As you have abstained, Sir, "from entering into "any calculation on the subject,"‡ permit me merely

* Vide Life of Fulton, page 140.

† Colden's Vindication, p. 121. ‡ Ibid. p. 151.

to state what constituted the Stock for which you originally paid your money, and by what rate its par value is ascertained. Some information upon these points may be materially useful to any member of the Council of Revision, Senator, or Assemblyman, (for I presume none other would be "*acceptable to the* "*rest of the Company,*) who might be disposed to purchase.

If what I have heard on this subject be correct, (and from the source from which I derive my intelligence, I cannot doubt its accuracy,) the whole capital stock of the proprietors of the North River Steam Boats was estimated, at the time of Mr. Fulton's contract for the sale of one-fifth part of it to you and your associates, at $500,000,—and consisted, in the first place, of the vessels then plying as passage boats on Hudson River, viz. *The Car of Neptune*, *The Paragon*, *The Richmond*, and, I believe, *The Firefly ;* valued together at $200,000. The balance of $300,000 was composed of the *estimated value of the exclusive privilege.* Before the consummation, however, of the bargain in the form in which it was subsequently carried into effect, *The Chancellor Livingston* was built, and the $120,000, which she cost, added to the capital stock of the company ; the total amount of which, therefore, is computed at six hundred and twenty thousands.

Now, as of this amount three hundred thousand dollars are made up of the arbitrary valuation affixed to the possession of the Monopoly ; it follows, that when you, and those who were associated with you in your purchase, are dividing, say five *per centum*, over and above the lawful interest upon the sum which you actually advanced ; the immediate

representatives of Messrs. Livingston and Fulton, are, at the same time, drawing an equal proportion of surplus profits, not only upon the remaining four-fifths of the estimated value of the boats, but also upon the imaginary capital of which the remainder of their portion of the stock is composed. Thus, whilst the sum actually advanced by you, and your associate purchasers, would yield you an annual interest of *only twelve per centum*, the proprietors of the remaining four-fifths of the stock would receive a like interest upon the estimated amount of their actual advances, of nearly *twenty-four per centum*. It is, therefore, clear, that your offer affords no just criterion for judging of the actual value of the Monopoly, nor for estimating the aggregate amount of gross profits derived from its possession.*

* The opinion intimated in the Report of the Committee, in 1817, in regard to the profits derivable from the Monopoly, and alluded to by me in my former Letter, must, of course, be understood in reference to preceding years, and not to the subsequent period, in which those profits have, no doubt, been materially reduced. There are some data, however, for calculating their present amount, which render it doubtful, at least, whether the gross income received from the North River Steam Boats, be actually so *trifling* as has lately been represented. From the returns made to the Comptroller, it appears that the tax on Steam boat passengers produced, during the years 1817 and 1818, a nett aggregate amount of $37,620.18,—to this must be added the sum of $2,565.18, being the proportional amount of six weeks of the first year, after the Boats commenced running, and before the Law laying the tax commenced its operation,—and a further sum of about $1,250 for expenses of collection. The gross amount of the tax for the two first years will then be $41,440, and the average annual product $20,720. Now, the distance between New-York and Albany being upwards of one hundred and fifty miles, whilst all passengers for distances over one hundred miles, pay a tax of one dollar

But if it did afford a certain guide, what would it be to the purpose? Are the adventitious consequences resulting from a Contract, to be the test of its *validity?* or, are the *Policy*, *Justice*, and *Constitutionality* of a State Monopoly, and the sanctions by which its enjoyment is defended, to be determined by a rule of Arithmetic? Are they not to be resolved upon different principles,—by the rules of common sense,—sound reason,—and established law;—or, are you serious in claiming an exemption from those rules, as amongst the privileges of your MONOPOLY.

Thus, Sir, have I at length completed the laborious and thankless task, which you thought proper to assign to me. In the execution of this bounden duty, I have endeavoured to reply to you upon every point which seemed to require explanation or defence;—and, if I have not practised so much forbearance on this as on the former occasion of my addressing you, it must be recollected, that he, who had attempted to outrage my feelings, could hardly have expected, that much consideration would be manifested for his

each,—all for distances less than one hundred miles and over thirty miles, half that sum,—and all under thirty miles pay nothing;—the sum of one dollar for each passenger, is probably the fair average proportion between the gross amount of the tax collected and the gross amount of passage money received;—*i. e.* for every dollar collected for the State, seven will have been received by the proprietors of the Steam boats. So that $20,726 of tax, will give upwards of $145,000 of gross annual income from the Boats, or nearly twenty-three per centum on $620,000, the assumed par value of the stock,—and more than forty-four per centum upon the estimated proportion of actual capital advanced by the proprietors of four-fifths of the shares, and a nett annual income to them of near fifteen *per centum*, even allowing the expenses of the establishment to be "equal to *two-thirds* of the gross receipts."

own. When you first drew the attention of your "Literary and Philosophical" associates to the origin of this controversy, you made your statements in perfect security;—and, when under their sanction, you gave publicity to your attacks upon a delegated portion of a former Legislature, you never dreamt, that any individual of that dissolved and irresponsible Body, would have had the temerity to repel them.

But, I felt myself impelled to resistance by motives, stronger than the ties of legal obligation,—and the defence which the justice of my cause enabled me to make,—struck home to your conscience. It made you feel, that you were rash and unjust, and alarmed you as to its effects upon public opinion. Hence, you sought to assuage your feelings, by the balm of self-flattery,—and, hence, you were unwearied in your modest efforts to recal the public to a just sense of your own surpassing merits. Hence, too, your tone of lofty pretence and affected contempt;—your frequent references to my country residence, and comparative obscurity;—and your own wealth, reputation, and professional eminence;—my single cause, and your own multiplied engagements;—the time and labour bestowed by me on the composition of my Letter, and the rapid ease with which you, *subsecivis horis*, struck off your Reply;—my imputed ignorance,—narrowness of mind,—long cherished resentment,—and unfeeling malignity;—your own perfect knowledge of the subject,—large and liberal views,—warmth of friendship,—tenderness of heart, and noble generosity of temper!——

All this, it is not difficult to interpret. There is a certain feverish irritability about some men, on the subject of their own reputation and consequence, which perpetually betrays the secret which they are the most desirous to conceal. The slightest insinuation, the most harmless jest, is felt and resented by them as a serious injury. They seem in constant fear, lest their own extraordinary merits should be forgotten;—their claims to peculiar distinction overlooked, by an unthinking or ungrateful world;—they are never, therefore, weary in displaying and rehearsing their titles to consideration,—but seize every occasion to remind the public of the vast debt of respect, of admiration, and gratitude, which it owes to them. The application of these remarks, I leave, Sir, to your own sagacity. The brave man is calm and unpretending, whilst none are so apt to swell and bluster, and menace, as those who know, that the world suspect their courage, and are conscious, that the suspicion is not groundless. I have sometimes thought, (and with all possible humility I make the suggestion,) that a similar opposition of conduct, springing probably from the same motives, is observable between the man of real ability and *the egotistical pretender.*

You have made, Sir, a needless confession of your inexperience as an Author; but, as an Advocate, you boast, that your experience has been great and various; and it seems strange, that in the course of that experience, you have not gleaned this obvious truth,—"That the reasoning of an angry man is sel-"dom effectual." Anger sometimes stimulates the fancy, quickens the invention, and makes men fluent and figurative, who are sufficiently dull and prosaic

in their ordinary discourse,—but the effects of this passion on the other faculties of the mind, are not commonly so fortunate. It is extremely apt to blunt the perceptions, confuse the judgment, and bewilder the recollection.

Else, Sir, you would have regarded it as a misfortune, rather than a reproach, that I had entered upon the active duties of life, in the same part of the State where you had yourself commenced your professional career. You would have considered, that I had in some measure emerged from my native obscurity,—without the patronage of private friendship,—without promotion to public office,—and without the surrender of my independence;—you would have reflected, that I had left behind me a reputation, irreproachable with habitual indulgence in idle dissipation,—unsullied by vulgar associations and low debaucheries;—and you would have remembered, that if I had not obtained from the favour of a party, one of its most lucrative rewards for service,—if I had no *Relative* to push my fortunes at the Bar, I had, at least, escaped the imputation of deserting the one, or witnessing with treacherous neutrality the sacrifice of the other.

I am,
Sir,
Your most obedient,
Humble servant,
W. A. DUER.

APPENDIX.

A.

To the Honourable the Secretary of State, the Secretary of War, and the Attorney-General—

The Petition of JOHN FITCH, of the City of Philadelphia,

HUMBLY SHEWETH—

That your petitioner, in the spring of the year one thousand seven hundred and eighty-five, conceived the idea of applying steam to the purposes of propelling vessels through the water: that, fully satisfied, in his own mind, of the practicability of such a scheme, of its great immediate utility, and the important advantages which would in future result therefrom, not only to America, but the world at large, if the scheme should be carried into effectual operation, he divested himself of every other occupation, and undertook the arduous task, not doubting, that when perfected, he should be amply rewarded. In his first attempts to procure assistance from congress, and the legislatures of many of the states, from the peculiar situation of their finances and the seeming impossibility of the success of his scheme, he met with no relief. Not entirely discouraged by these disappointments, he continued his application to his project, and prayed several of the states for an exclusive 'right to the use of fire and steam to navigation:' that New-Jersey, New-York, Pennsylvania, Delaware, and Virginia, granted him an exclusive right, agreeably to the prayer of the petition, for fourteen years.

That the impracticability of procuring experienced workmen in America, your petitioner's total ignorance of the construction of a steam engine, together with the necessary deviation from the form described in books, in order to accommodate its weight and bulk to the narrow limits of a vessel, have caused him not only to expend about eight thousand dollars in successive experiments, but nearly four years of some of his grants have expired, before he has been able to bring his engine to such a degree of perfection as to be carried into use. That having at length fully succeeded in his scheme, proofs of which he is prepared to offer, he trust he now comes forward not as an imaginary projector, but as a man

who, contrary to the popular expectation, has really accomplished a design, which, on examination, will clearly evince the many and important advantages which must result therefrom to the United States, some of which your petitioner begs leave to enumerate.

The western waters of the United States, which have hitherto been navigated with great difficulty and expense, may now be ascended with safety, conveniency and great velocity, consequently by these means, an immediate increased value will be given to the western territory : all the internal waters of the United States will be rendered much more convenient and safe, and the carriage on them much more expeditious ; that from these advantages will result a great saving in the labour of men and horses, as well as expense to the traveller.

Your petitioner also conceives, that the introduction of a complete steam engine, formed upon the newest and best principles, into such a country as America, where labour is high, would entitle him to a public countenance and encouragement, independent of its use in navigation ; he begs leave to say, that the great length of time and vast sums of money expended in bringing the scheme to perfection, have been wholly occasioned by his total ignorance of the improved state of steam engines, a perfect knowledge of which has not been acquired without an infinite number of fruitless experiments ; for not a person could be found who was acquainted with the minutia of Bolton and Watts' new engine ; and whether your petitioner's engine is similar or not to those in England, he is to this moment totally ignorant ; but is happy to say, that he is now able to make a complete steam engine, which in its effects, he believes, is equal to the best in Europe ; the construction of which he has never kept a secret.

That on his first undertaking the scheme, he knew there were a great number of ways of applying the power of steam to the propelling of vessels through the water, perhaps all equally effective : but this formed no part of his consideration, knowing, that if he could bring his steam engine to work in a boat, he would be under no difficulty in applying its force ; therefore he trusts no interference with him in propelling boats by steam, under any pretence of a different mode of application, will be permitted ; for should that be the case, the employment of his time, and the amazing expense attending the perfecting his scheme, would, whilst they gave the world a valuable discovery, and to America peculiar and important advantages, eventuate in the total ruin of

your petitioner; for a thousand different modes may be applied by subsequent navigators, all of them benefiting by the expense and persevering labour of your petitioner, and thus sharing with him those profits which they never earned: such a consequence he is confident, will not be permitted by your honourable body.

Your petitioner, therefore, prays that your honours will take the subject of his petition into consideration; and by granting him an exclusive right to the use of the steam navigation for a limited time, do him that justice which he conceives he merits, and which he trusts will redound to the honour and add to the true interest of America. And your petitioner, as in duty bound, will ever pray.

JOHN FITCH.

New-York, 22d June, 1790.

B.

THE UNITED STATES—

To all to whom these Presents shall come, Greeting:

Whereas John Fitch, of Philadelphia, in the state of Pennsylvania, hath presented a petition to the secretary of state, the secretary for the department of war, and the attorney-general of the United States, alleging and suggesting that he hath invented the following useful devices, not before known or used, that is to say—for applying the force of steam to a trunk or trunks for drawing water in at the bow of a boat or vessel, and forcing the same out at the stern, in order to propel a boat or vessel through the water; for forcing a column of air through a trunk or trunks, filled with water, by the force of steam; for forcing a column of air through a trunk or trunks, out at the stern, with the bow valves closed by the force of steam; and for applying the force of steam to cranks and paddles, for propelling a boat or vessel through the water; and praying that a patent may be granted therefor: And whereas the said invention hath been deemed sufficiently useful and important—These are, therefore, in pursuance of the act, entitled "An act to promote the progress of useful arts," to grant to the said John Fitch, his heirs, administrators or assigns, for the term of fourteen years, the sole and exclusive right and liberty of making, using, and vending to others, to be used, the said invention, so far

as he, the said John Fitch, was the inventor, according to the allegations and suggestions of the said petition.

In testimony whereof, I have caused these letters to be made patent, and the seal of the United States to be hereunto affixed. Given under my hand, at the
L. S. the city of Philadelphia, this twenty-sixth day of August, in the year of our Lord one thousand seven hundred and ninety-one, and of the Independence of the United States of America, the sixteenth.

GEO : WASHINGTON.

By the President,

TH : JEFFERSON.

City of Philadelphia, August 26th, 1791.

I do certify that the foregoing letters patent were delivered to me, in pursuance of the act, entitled " An act to promote the progress of useful arts," that I have examined the same, and find them conformable to the said act.

EDM : RANDOLPH,
Attorney-General for the U. S.

Delivered to the within named John Fitch, this 30th day of August, 1791.

TH : JEFFERSON.

To all to whom these Presents shall come, Greeting :

I certify that the annexed is a true copy of a patent granted to John Fitch, for his improvement, being the application of steam, as a power, in propelling boats or vessels ; dated August 26, 1791.

In testimony whereof, I, John Q. Adams, Secretary of State of the United States, have hereunto subscribed my name, and caused the seal of the Department of State to be affixed.

Done at the City of Washington, this 11th day of August, A. D. 1818. JOHN Q. ADAMS.

C.

THE UNITED STATES OF AMERICA—

To all to whom these Presents shall come.

Whereas Robert Fulton, a citizen of the United States, hath alleged that he has invented a new and useful improvement in steam boats, which improvement, he states, has not been kno wn

or used, before his application, hath made oath, that he does verily believe that he is the true inventor or discoverer of the said improvement; hath paid into the treasury of the United States the sum of thirty dollars, delivered a receipt for the same, and presented a petition to the secretary of state, signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose: These are, therefore, to grant, according to law, to the said Robert Fulton, his heirs, administrators or assigns, for the term of fourteen years, from the 11th day of February, one thousand eight hundred and nine, the full and exclusive right and liberty of making, constructing, using and vending to others, to be used, the said improvement, a description whereof is given in the words of the said Robert Fulton himself, in the schedule hereunto annexed, and is made a part of these presents.

In testimony whereof, I have caused these letters to be made patent, and the seal of the United States to be hereunto affixed.

Given under my hand, at the city of Washington, this 11th day of February, in the year of our Lord one thousand eight hundred and nine, and of the Independence of the United States of America, the thirty-third.

THOMAS JEFFERSON.

By the President,

JAMES MADISON,

Secretary of State.

City of Washington, To wit:

I do hereby certify, that the foregoing letters patent were delivered to me, on the 11th day of February, in the year of our Lord one thousand eight hundred and nine, to be examined; that I have examined the same, and find them conformable to law; and I do hereby return the same to the Secretary of State, within fifteen days from the date aforesaid, to wit, on this 11th day of February, in the year aforesaid.

CÆSAR A. RODNEY,

Attorney-General of the United States.

The SCHEDULE referred to in these Letters Patent, and making Part of the same, containing a Description, in the Words of the said Robert Fulton himself, of his Improvement in Steam Boats.

KALORAMA, *District of Columbia, January 1st,* 1809.

I, Robert Fulton, native of Pennsylvania, citizen of the United States of America, now living at Kalorama, in the District of Co-

lumbia, give the following written descriptinon of my discoveries inventions, and improvements on steam boats. To obtain the power for driving the boat, I make use of Messrs. Bolton and Watts' steam engine, but instead of a beam above the cylinder, I have a triangular cast iron beam on each side of it, and near the bottom of the boat the base of the triangle is seven feet long; in the centre of the base a perpendicular is raised three feet six inches high, which is the vertex of the triangle; the two triangles are fixed on one strong iron shaft, so that they play together. On the top of the piston rod, there is a tee piece or strong iron bar which moves in guides at each side of the cylinder, from each end of the tee piece; and passing down by the sides of the cylinder is a strong bar of forged iron, called a shackle, which is connected by a shackle pin to the end of the beam; thus the end of the beam moves through a curve in a perpendicular direction, and its vertex moves through a curve in a horizontal direction; the other end of the triangle is cast with a weight of iron sufficient to balance the weight of the piston, and all the weight on the opposite side of the fulcrum, or centre of the base line. From the vertex of each triangle, a shackle, from six to eight feet long, is connected with a crank which is fixed on each side of the propeller wheels; close to each crank is a cast iron wheel about four feet six inches diameter, each driving a pinion two feet three inches diameter; these two pinions are on one shaft, in the centre of which is a fly wheel ten feet diameter; the movement for the air pump is taken from the base line of the beam and twenty-one inches from the fulcrum. The condensing water comes through the sides or bottom of the boat by a pipe, which enters the condenser, and is regulated by a cock or valve. The hot well, the forcing pump, to replenish the boiler, the steam guage, the safety valve, the float in the boiler, to regulate the quantity of water, the plug tree, and hand-geer, &c. are so familiar to all persons acquainted with the steam engine, and may be arranged in such a variety of ways, as not to require a description. I prefer a propelling wheel or wheels, to take the purchase on the water; they may be from eight to twenty feet diameter, and divided into any number of equal parts, from three to twenty; each wheel may have from three to twenty propellers, but a wheel or wheels from twelve to fifteen feet diameter each, with from eight to twelve propellers, will be found to apply the power of the engine to great advantage. Hitherto I have placed a propelling wheel on each

side of the boat, with a wheel guard or frame outside of each of them for protection. A propelling wheel or wheels, may, however, be placed behind the boat or in the centre, between the connecting boats. To give room for the machinery, passengers, or merchandize, I build my boats five or more times as long as their extreme breadth at the water line. The extreme breadth may be one third from her bow, or in the middle, in which case the water line will form two equal segments of a circle united at the ends. To diminish the plus and minus pressure, I make the bow and stern sharp to angles of at least 60 degrees, and that the boat may draw as little water as possible, I build it flat, or nearly so, on the bottom. Having mentioned the essential component parts of a steam boat and its mechanism, its successful construction and velocity will depend—

First—On an accurate knowledge of her total resistance, while running 1, 2, 3, 4, 5, or 6 miles an hour in still water.

Second—On a knowledge of the diameter of the cylinder, strength of the steam, and velocity of the piston, to overcome the resistance of a given boat while running 1, 2, 3, 4, 5, or 6 miles an hour in still water.

Third—On a knowledge of the square feet or inches which each propeller should have, and the velocity it should run to drive a given boat 1, 2, 3, 4, 5, or 6 miles an hour through still water.

It is a knowledge of these proportions and velocities, which is the most important part of my discovery, on the improvement of steam boats.

The following definitions, tables, and calculations, will lead to a clear idea of them.

DEFINITIONS.

By head pressure, is meant, the total pressure against the bow when the boat is at rest.

By stern pressure is meant the total pressure against the stern, when the boat is at rest.

Plus pressure is additional pressure against the bow while the boat moves forward; it is occasioned by the fluid being displaced, and is in addition to head pressure.

Minus pressure is a diminution of stern pressure, occasioned by the fluid not passing so strongly against the stern when the boat moves forward as when at rest.

Friction arises either from the adhesion of the particles of the fluid to the surface of the body, or from the roughness of the body, or from both these causes united.

Bow resistance is minus pressure, and the friction of the water against the bow united.

Stern resistance is minus pressure, and the friction of the water against the stern united.

Table of Friction of Plus and Minus Pressure, and of the resistance of one square foot of propeller.

Nautical miles an hour,		1	2	3	4	5	6
When a boat is smooth and clean, the friction on every 50 square feet will be	lbs.	0.70	2.36	4.74	7.75	11.32	15.43
The plus and minus pressure on each foot of bow of 60 degrees the stern being also 60 deg's.	lbs.	0.88	3.31	7.15	12.37	18.93	26.78
The plus and minus pressure on each foot of bow of 20 degrees the stern being also 20 deg's.	lbs.	0.61	2.29	4.97	8.64	13.30	18.90
The resistance of one square foot of propeller as is to	lbs.	3.25	13.09	29.36	51.95	80.76	115.71

By this table the total resistance of all lengths, widths, and draft of water of all boats with bows and sterns on angles of 20 or 60 degrees may be calculated. The resistance of one square foot of propeller is also shewn: Hence, when any particular sized boat has been determined on, and the number of miles which she is to run in still water, has been decided. First, find her total resistance for the velocity; then by the table also, find the number of square feet or inches of a propeller, which while running a velocity equal to the boat, will make a resistance equal to the boat. It will consequently follow, that the resistance of the boat and propellers being equal, they will pass through equal spaces in equal times, and while the boat advances one mile the propellers will strike through the water one mile backwards; therefore, if the boat is to run 1, 2, 3, 4, 5, or 6 miles an hour, the speed of the propellers in the water must be 2, 4, 6, 8, 10, or 12 miles an hour, one half of each these velocities is spent in striking water back to create a resistance equal to the resistance of the boat, the other half is to overtake as she advances: For example, when a boat moves one mile an hour, the water runs along her sides with the speed of one mile an hour; were the propellers to run only one mile an hour, they would not touch the water which was running from them with any force; but if they run two miles an hour, they would strike the water with the force of one mile, and create a resistance equal to the resistance of the boat.

The following is the method of finding the total resistance of a boat, and of calculating the power and proportions of the machinery to the speed which she is to run. For these calculations, say, boat 154 feet long, 18 feet wide, drawing two feet of water; bow and stern on angles of 60 degrees; steam engine making a 4 foot stroke and 15 double strokes a minute, equal 2 feet a second; the boat to run four miles an hour.

Plus and minus pressure on one foot, - -	lb. 12.37
Multiplied by 36 feet, the boat's bow, - -	445.32
Friction on 848 feet of bow and and stern, at 7.75 lbs. for every 50 square feet, - - - -	131.75
Friction on 2.200 square feet of the body of the boat,	341.00
Total resistance of the boat, - - - -	918.07
A like power for the propellers, - - -	918.07
Total power, - - - - - -	lbs. 1836.14

to be felt at the end of the propellers, running 4 miles an hour, or 6 feet a second. This is three times as fast as the piston moves, hence 1836.14 lbs. must be multiplied by 3 equal 5508.42 lbs. or the power of the engine. A cylinder 27 inches diameter, equal 729 round inches, and 8 pounds to the inch gives 5832 lbs. The periphery of the propeller wheel must run 8 miles an hour, or 12 feet a second, equal 720 feet a minute. Wheels 14 feet diameter, 44 round, and 16 revolutions a minute, will give 704 feet a minute, which is sufficiently near. The total resistance of the boat is 918.07 lbs.

The resistance of one square foot of propeller, running 4 miles an hour, is 51.95 lb.—17½ square feet give resistance, - - - - - -	909.12

This is 8¾ feet in each propeller. By this example all necessary calculations may be made.

I make use of sails and take advantage of the wind to aid the engine, or when the wind is sufficient, I stop the engine, throw the wheels out of gear, and move by the power of the wind only. To prevent the boat making lee way, she has lee board or boards, which are let down into the water while she is sailing. Hitherto there have been two lee boards on each side of the boat; one on each side near the bow, and one on each side near the stern. That the helmsman may steer to advantage, I place the wheel for steering, and lead the tiller ropes so near the middle of the boat as to

enable him to have an uninterrupted view forward. In any case where a current against the boat is superior to the power of the engine to pass it, I propose to cast anchors in such waters, or obtain any other fastening which will enable me to warp the boat by the power of the steam engine, from station to station, until the rapid be passed. Such steam boats as are for passengers, I build with births, good sophas and beds, kitchen, bar, and ice magazine, with every convenience for giving breakfasts, dinners, tea, and suppers, either in the cabins, or under an awning or awnings on deck.

(Witnesses,) ROBERT FULTON.
JOHN R. LIVINGSTON,
MATN. LIVINGSTON.

To all to whom these Presents shall come, Greeting:

I certify that the annexed is a true copy of a patent granted to Robert Fulton, for his improvement in steam boats; dated February 11th, 1809.

In testimony whereof, I John Q. Adams, Secretary of
L. S. State of the United States, have hereunto subscribed my name, and caused the seal of the Department of State to be affixed.

Done at the city of Washington, this 6th day of June, A. D. 1818. J. Q. ADAMS.

D.

THE UNITED STATES OF AMERICA.

To all to whom these Letters Patent shall come.

Whereas Robert Fulton, a citizen of the United States, has alleged, that he has invented a new and useful improvement, entitled, "Inventions and Discoveries, for constructing Boats or Vessels, which are to be navigated by the power of Steam Engines," which improvement, he states, has not been known or used before his application; hath made oath, that he does verily believe, that he is the true inventor or discoverer of the said improvement; hath paid into the treasury of the United States, the sum of thirty dollars, delivered a receipt for the same, and presented a petition to the Secretary of State, signifying a desire of obtaining an exclusive property in the said improvement, and praying, that a patent

may be granted for that purpose: These are, therefore, to grant according to law, to the said Robert Fulton, his heirs, administrators or assigns, for the term of fourteen years, from the ninth day of February, one thousand eight hundred and eleven, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement; a description whereof is given in the words of the said Robert Fulton, himself, in the schedule hereunto annexed, and is made a part of these presents. In testimony whereof, I have caused these Letters to be made patent, and the seal of the United States to be hereunto affixed.

Given under my hand, at the City of Washington, this ninth day of February, in the year of our Lord one thousand eight hundred and eleven, and of the independence of the United States of America the thirty-fifth.

JAMES MADISON.

By the President,

ROBERT SMITH,

Secretary of State.

City of Washington, To wit:

I do hereby certify, that the foregoing Letters Patent were delivered to me on the ninth day of February, in the year of our Lord one thousand eight hundred and eleven, to be examined: That I have examined the same, and find them conformable to law; and I do hereby return the same to the Secretary of State, within fifteen days from the date aforesaid, to wit, on this ninth day of February, in the year aforesaid.

CÆSAR A. RODNEY,

Attorney-General of the United States.

The Schedule referred to in these Letters Patent, and making part of the same, containing a description in the words of the said Robert Fulton, himself, of his improvement, entitled, "Inventions and Discoveries, for constructing Boats or Vessels, which are to be navigated by the power of Steam Engines."

October second, eighteen hundred and ten, I Robert Fulton, native of Pennsylvania, and citizen of the United States of America, now residing in the city of New-York, give the following description of my inventions and discoveries, for constructing boats or vessels, which are to be navigated by the power of steam engines, believing myself to be the original inventor and discoverer of the following combinations.

To obtain the power of driving the boat, I make use of Watt and Bolton's steam engine, or any other steam engine of equal power, my claim to invention not extending to the steam engine, but to the proportioning, combining, and applying it in such a manner to a boat or vessel of such dimensions as to drive her to a certainty, more than four miles an hour in still water. After having determined the length, width, and draught of water of the boat, the details of my patent, dated February 11th, 1809, will shew the mode for ascertaining her total resistance while running 1, 2, 3, 4, 5, or 6 miles an hour in still water; also, the mode for proportioning the power of the engine, the velocity of the piston, and the diameter of the water wheels, with the velocity of their periphery, and the size of each of their propellers, to overcome any given resistance of boat while running 1, 2, 3, 4, 5, or 6 miles an hour in still water. Having been the first to demonstrate the superior advantages of a water wheel or wheels, I claim as my exclusive right, the use of two wheels, one over each side of the boat to take the purchase on the water; to turn such wheels forward or backwards, I claim as my combinations and exclusive right the following modes of communicating the power from the piston rod of the steam engine to them.

First—By two triangular beams, which are described in the details of my patent, dated February 11th, 1809, and only mentioned here to bring together my several combinations.

Second—By wheels without a beam. In this case, a crank or crank wheel is on each side of the cylinder, to which shackle bars descend from the cross bar on the top of the piston rod, which, turning the cranks, the water wheels being connected with their axis, turn also these two crank wheels, drive two wheels of equal diameters, from which a movement may be taken to work the air pump, which two wheels drive two pinions, on the shaft of which is the fly wheel or wheels.

Third—By means of a cast or wrought iron beam, on each side of the cylinder, near the bottom of the boat, from a cross bar on the top of the piston rod, a shackle bar descends on each of the cylinders and connects with the ends of the beams; a shackle bar arises from the other end of each beam to a cross bar, from which cross bar shackle bars descend to turn two cranks or crank wheels, to the axles of which the water wheels are connected; the two crank wheels drive two pinions, on the shaft of which the fly wheels are fixed.

Fourth—By means of a cast or wrought iron beam above the cylinder, which receives motion from the piston rod; from the other end of the beam a strong shackle bar gives motion to a crank, on the axle of which, or connected with it, are the two water wheels; from the crank shaft a movement may be taken to turn the fly wheels, or by using sun and planet wheels, the shaft of the sun wheel will act as a fly, and drive the water wheels by means of a pinion on the sun wheel shaft and a wheel on the water wheel shaft, thus, if required, reducing the revolutions of the water wheels to half the number of revolutions of the fly; or if the water wheels are put on the shaft of the sun wheels and weighted with iron, they will act without any other fly, but not to such advantage as with a fly and water wheel, because rapid moving and small propellers is a loss of power. I use coupling boxes, or any other means, to throw the propelling wheels in or out of gear, or to throw one wheel out and work the other as may be required. This convenience in combining the machinery of steam boats, I claim as my discovery and exclusive right, whatever may be the mode by which it may be executed. I also claim as my invention, the guards which are round the outside of the propelling wheels, which guards may support the outside gudgeons of said propelling wheels and give a convenience of a deposit for fuel, bins or lockers, for various materials; water closets for the convenience of passengers, and steps to enter from or go into the row boats, which guards protect the wheels from injury by wharves, vessels, &c. &c. I claim as my invention, to project from the side or sides of a steam boat, beams, or timbers, or spars, or fenders of wood or iron of any kind, to guard or protect the water wheels from injury by wharves, vessels, &c. &c. I also claim the exclusive right to cover the water wheels, whether by boards, netting or grating, canvass or leather, or in whatever manner it may be done to prevent them throwing water on deck or entangling in ropes. I claim as my invention, to place the tiller or steering wheel, and pilot and steersman, further forward in steam boats than is usual in other vessels, the necessity of which is, that the boat being long and the deck covered with passengers, the pilot could not see forward, unless near the middle of the deck; hence, any one who moves a steersman further forward in a steam boat than is usual in other vessels, shall be considered as using this part of my invention in the convenient arrangement of steam boats. I claim as my invention, the straight and diagonal braces, which I have placed in the sides of

my steam boats to give them strength to support the weight of the engine, boiler, and machinery, and which braces extend from a line behind the boiler to a line forward of the machinery. I claim as my invention, to set the engine and machinery in a frame which is laid on the bottom of the boat, which frame must be of a length, breadth, and strength, to bear the weight of the machinery and working of the engine, and divide it over so great a surface of the boat as to do her no injury. I also claim as my invention, to accommodate a steam engine to a boat, my mode of setting the air pump and machinery behind the cylinder that is on the side opposite the hand-gear, and which is the reverse of the mode in which engines are put up on land. I claim as my invention and exclusive right, the combination of sails with a steam engine to drive a boat, I being the first who have done so, and proved by practice, the utility of the union of the two powers of wind and steam: Hence, as a boat may be rigged a variety of ways, my invention is not for any particular mode of rigging, but for the discovery and proof by practice, of the importance of using sails with a steam engine to drive a boat. I claim as my invention, my particular mode of proportioning and placing a propelling wheel or wheels in the stern of a boat, which wheel or wheels are in a chamber formed by the two sides of the boat, extending aft one or more feet further than the extreme diameter of the propelling wheel, to each of which side projections there is a rudder, which two rudders, connected by a cross bar working on pivots, cause them to move together and parallel to each other; from this cross bar, or from the rudders, the ropes or chains for steering lead on to the pilot.

To put a propelling wheel or wheels in motion at the stern of a steam boat, a movement may be carried from the engine to it, or them, by bevel wheels and shafts to opposite the centre of the axle of the propelling wheel and between two wheels, or by bevel wheels and a shaft on one side of one propelling wheel, or by a triangular beam at the engine, and long shackle bars moving in guides on rollers, and which communication may be performed by shackle bars leading along the centre of the boat, turning a crank between two wheels, or by a shackle bar on each side of the propelling wheel, each acting on a crank on each end of the shaft of the propelling wheel.

ROBERT FULTON.

(Witnesses,)
JOHN NICHOLSON,
GEOR. LYON.

To all to whom these Presents shall come, Greeting:

I certify, that the annexed is a true copy of a patent granted to Robert Fulton, for his improvement, entitled, "Inventions and Discoveries, for constructing Boats or Vessels, which are to be navigated by the power of Steam Engines;" dated February 9th, 1811.

In testimony whereof, I, John Q. Adams, Secretary of
L. S. State, of the United States, have hereunto subscribed my name, and caused the seal of the Department of State to be affixed.

Done at the City of Washington, the sixth day of June, A. D. 1818. J. Q. ADAMS.

E.

CERTIFICATE.

District of Columbia, }
Washington County. }

At the request of Doctor William Thornton, of this county, personally appeared before me the subscriber, one of the justices of the peace for the said county, Oliver Evans, of Philadelphia, who solemnly affirmed, that when John Fitch and his company were engaged in constructing their steam boat in Philadelphia, he the said Oliver, suggested to the said John Fitch, the plan of driving and propelling the said boat by paddle or flutter wheels at the sides of the boat; when the said Fitch or some other person, but he thinks it was Fitch, informed him, that one of the company had already proposed and urged the use of wheels at the sides, but that he had objected to them. The said Oliver also states, that he afterwards mentioned the same to Henry Voight, one of the members of that company, who said, that Doctor William Thornton, also a member of the same, was the person who had proposed the said paddle or flutter wheels at the sides of the boat, but that both himself and John Fitch had objected to them.

The said Oliver further saith, that Robert Fulton, the patentee of steam boats in the state of New-York, had observed to him, that he deemed it impossible to drive a boat or vessel by steam at a greater speed than five miles per hour; but the said Oliver says, he had understood, Fitch's boat had very far exceeded that speed, and that Fitch's experiment had completely succeeded to shew

that boats could be driven by steam to advantage; and also, that when the said John Fitch was afterwards setting out for the western country, he called on the said Oliver at his house, and declared his intention to be, to form a company to establish steam boats on the western waters, of the advantages of which, he appeared to have formed vast conceptions and great expectations. The said Oliver also saith, that some time about the years 1786, 1787, or 1788, the said Fitch informed him, that he contemplated employing his steam boat on the lakes, and meant to construct them with two keels, to answer as runners, and when the lakes should freeze over, he would raise his boat on the ice, and by a wheel on each side, with spikes in the rims to take hold of the ice, he calculated it would be possible to run thirty miles an hour; also, that he meant to tow boats and other floats by steam boats.

(Signed) OLIVER EVANS.

Affirmed to before the subscriber, one of the justices of the peace for Washington county, Columbia, this 16th day of December, 1814.

JOSEPH FORREST.

F.

Oxford, (N. Hampshire,) Oct. 31, 1818.

William A. Duer, Esq.

SIR,

In answer to your inquiries, relative to my experiments with steam boats many years ago, at New-York, previous to the construction of them by the late Chancellor Livingston and Mr. Fulton, I will state the simple facts as briefly as possible, and as nearly as I can at this time recollect.

As nearly as I can recollect, it was as early as 1790, that I turned my attention to improving the steam engine, and in applying it to the purpose of propelling boats. I began my experiments in this vicinity on Connecticut river. When my arrangements were sufficiently mature for exhibition, I went to New-York and built a boat, and during three successive summers, tried many experiments in modifying the engine and in propelling. Sickness in my family calling me home, I had the boat brought to Hartford as a more convenient place, and there ran her in presence of many persons.

The next season, having made sundry improvements in the engine, I went again to New-York, and applied the power to a wheel in the stern, by which the boat was impelled at the rate of about five miles an hour. I invited the attention of Chancellor Livingston, and he, with Judge Livingston, Mr. Edward Livingston, Mr. Stevens and others, went with me in the boat from the ferry as far as Greenwich and back, and they expressed very great satisfaction at her performance and with the engine.

Chancellor Livingston requested me to continue my endeavours to devise a better mode of propelling, and I continued my experiments through that summer, encouraged by his promises, which were to give me a considerable sum, provided I succeeded in making a boat run eight miles an hour. He offered me at that time, for what I had done, seven thousand dollars for the patent right on the North river and to Amboy. But I did not deem that sufficient, and no bargain was made. I never received any thing from him.

Being desirous of devising a more effectual mode of propelling, satisfactory to Chancellor Livingston and others, I continued my exertions; and as it had been sickly in New-York, I went to Bordenton, on the Delaware, in June, 1797, and there constructed a steam boat, and there devised the plan of propelling by means of two wheels, one on each side. The shaft ran across the boat with a crank in the middle, worked from the beam of the engine, with a shackle bar, (commonly so called,) which mode is in principle the same as that now used in the large steam boats.

I found that my two wheels answered the purpose very well, and better than any other mode that I had tried, and the boat was openly exhibited at Philadelphia.

From that time I considered every obstacle removed, and no difficulty remaining or impediment existing to the construction of steam boats on a large scale, and I took out patents for my improvements. The notoriety of these successful experiments enabled me to make very advantageous arrangements with Dr. Allison and others, to carry steam boats into effectual operation; but a series of misfortunes to him and others concerned, soon after deprived them of the means of prosecuting this design, defeated their purpose, and disappointed my expectations. But I did not wholly relinquish the pursuit; from time to time devising improvements in the engine. I recollect to have had repeated conversations with Chancellor Livingston and Mr. Fulton on these subjects. The

Chancellor once visited me at this place, and at his request and expense, I went once to see him at Clermont.

I assure you, Sir, I never had any doubt, but that I had a right to take out a patent for the application of two wheels to a steam boat, and have often told both Mr. Livingston and Mr. Fulton, that I had. To the latter, I once asserted this right, when on board his steam boat with him; nor could I ever see the propriety or justice of Chancellor Livingston having an exclusive right to steam boats in the state of New-York, merely on account of the suspension of the efforts of Fitch and company, when it was perfectly familiar to him, that at much labour and expense, and the employment of years devoted to this pursuit, I had actually succeeded, so that nothing was wanting to carry this mode of navigation into effect, but pecuniary means, especially when it is considered, that I actually held patents relating to this object at that time, and of which the Legislature of New-York did not seem to have been informed.

I have often made passages in the steam boats, and do not see in their construction any new principle, and it seems to me peculiarly hard, that the originator of those improvements, by which Messrs. Livingston and Fulton were enabled principally to succeed, should have had his right overlooked and himself excluded from the use of them on the very waters where many of his experiments were made.

I am, Sir, very respectfully,
Your most ob't. serv't,
SAMUEL MOREY.

G.

Washington, January 2d, 1818.

SIR,

Your letter of December 10th, enclosed to Dr. Thornton, as also the duplicate enclosed to Joseph Hopkinson, Esq. were duly received. I should have immediately answered you, but waited in hopes of receiving my papers from home, which contain my memorandum of dates, &c. but have not yet received them, and I did not choose to trust immediately to memory as to the precise periods when I made the experiment in steam boats. Mr. Hopkinson, who was counsel for Col. Ogden, in the trial before the New-Jersey legislature, to which you allude, tells me, that he has my deposition, taken at that time, but it is not here. However, I can

without hesitation, say, that in the summer or fall of the year 1797, I had, in connection with another gentleman, a small boat on the Delaware, or a creek emptying into the Delaware, near its mouth, at Bordenton, Burlington county, New-Jersey, with a steam engine on board and wheels at the side, similar to those of Fulton's boats, and that she was exhibited in presence of numbers of citizens with complete success. It was only for want of funds, that we did not then bring it into public use.

I remain your humble servant,

B. ALLISON.

H.

THE UNITED STATES OF AMERICA,

To all to whom these Presents shall come.

Whereas Daniel Dod, a citizen of the United States, hath alleged, that he has invented a new and useful improvement in the steam engine, which improvement he states has not been known or used before his application; hath made oath, that he does verily believe, that he is the true inventor or discoverer of the said improvement: hath paid into the treasury of the United States, the sum of thirty dollars, delivered a receipt for the same and presented a petition to the Secretary of State, signifying a desire of obtaining an exclusive property in the said improvement, and praying, that a patent may be granted for that purpose. These are, therefore, to grant according to law, to the said Daniel Dod, his heirs, administrators or assigns, for the term of fourteen years, from the 29th day of November, one thousand eight hundred and eleven, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement; a description whereof is given in the words of the said Daniel Dod himself, in the schedule hereto annexed, and is made a part of these presents.

In testimony whereof, I have caused these letters to
L. S. be made patent, and the seal of the United States to be hereunto affixed.

Given under my hand, at the City of Washington, this 29th day of November, in the year of our Lord one thousand eight hundred and eleven, and of the Independence of the United States of America the thirty-sixth.

JAMES MADISON.

By the President,

JAMES MONROE,

Secretary of State.

City of Washington, To wit:

I do hereby certify, that the foregoing Letters Patent were delivered to me on the twenty-ninth day of November, in the year of our Lord one thousand eight hundred and eleven, to be examined: That I have examined the same, and find them conformable to law; and I do hereby return the same to the Secretary of State, within fifteen days from the date aforesaid, to wit, on this 29th day of November, in the year aforesaid.

CÆSER A. RODNEY,
Attorney General of the United States.

The Schedule referred to in these Letters Patent, and making part of the same, containing a description in the words of the said Daniel Dod, himself, of his improvement in the steam engine.

I make the steam engine to work with a double impulse, on the general principles of Watt and Bolton's steam engines.

I form the condenser of a pipe, or number of pipes connected together, and condense the steam by immersing the pipes in cold water, either with or without an injection of water. For propelling a boat, I make use of two wheels, one at each side of the boat. These wheels are hung on an axis which lies across the boat. In the middle of this axis is a crank; to this crank is attached the lower end of a pitman. The upper end of the pitman is attached to one end of a lever beam; the main piston rod of the steam engine is attached. The lever beam is placed above the cylinder of the steam engine in the usual manner practised by Watt and Bolton.

The fly wheels of the steam engine I fix on the axis of the propelling wheels; or I make the fly wheels by weighting the propelling wheels with iron buckets or propelling boards, or with iron segments.

For producing steam I make use of two boilers, which I place in the bottom of the boat, one in each side of the space allotted for the machinery.

I fix the cylinder and the other parts of the steam engine between the boilers. The boilers I construct in the following manner: The outside of the boiler consists of a cylinder of a length and diameter sufficient to produce the requisite quantity of steam. This cylinder lies in a horizontal position. Within the cylinder is fixed a flue, of a length equal to the length of the cylinder. The form of this flue is that of a segment of a circle; it may be greater than a semicircle, whose diameter is less by four,

five, or six inches, (more or less,) than the diameter of the cylinder. This flue is placed within and near the lower side of the cylinder, leaving a small space for the water to pass under the flue. Within this flue, at one end, the fire is made, and at the opposite end is inserted the pipe for carrying off the smoke and producing a sufficient draught of air to make the fire burn briskly. The flat side of the flue (which is the upper side,) is strengthened and supported by perpendicular tubes, the inside of the flue extending from the top to bottom, or by rods or braces, extending from the upper side of the flue to the upper side of the cylinder, or by both these methods together.

The water in the boiler must be so high as to cover the flue. The flue will, therefore, be entirely surrounded with water on all sides, and the fire being made in the flue, very little heat will be lost. The axis on which the propelling wheels hang passes over the top of the boilers. I make use of a sufficient frame to support the steam engine, the propelling wheels, and the other machinery, and a proper fulcrum to support the lever beam.

I claim as my invention the following parts of the above described machinery.

1st. The construction of the Boiler.

2d. The Condenser, consisting ——

I also claim as my invention, the exclusive right to place the steam cylinder and other parts of the steam engine between two boilers in a steam boat, in the manner above described.

And I likewise claim as my invention, the disposition and arrangement of the several parts, and the combination of the whole machinery as above described.

(Witnesses,) DANIEL DOD.

AARON OGDON,

STEPHEN DOD.

To all to whom these Presents shall come, Greeting:

I certify, that the annexed is a true copy of a Patent granted to Daniel Dod, for his improvement in the steam engine; dated this 29th day of November, 1811.

L. S. In testimony whereof, I, J. Q. Adams, Secretary of State, of the United States, have hereunto subscribed my name, and caused the seal of the Department of State to be affixed.

Done at Washington, this 21st day of January, A. D. 1819.

J. Q. ADAMS.

I.

THE UNITED STATES OF AMERICA,

To all to whom these Presents shall come.

Whereas Daniel Dod, a citizen of the United States, hath alleged, that he has invented a new and useful improvement in the application of the steam engine to boats, mills, &c. which improvement, he states, has not been known or used before his application; hath made oath, that he does verily believe, that he is the true inventor or discoverer of the said improvement; hath paid into the treasury of the United States the sum of thirty dollars, delivered a receipt for the same, and presented a petition to the Secretary of State, signifying a desire of obtaining an exclusive property in the said improvement, and praying, that a patent may be granted for that purpose. These are, therefore, to grant according to law, to the said Daniel Dod, his heirs, administrators, or assigns, for the term of fourteen years, from the twelfth day of May, one thousand eight hundred and twelve, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement; a description whereof is given in the words of the said Daniel Dod himself, in the schedule hereto annexed, and is made a part of these presents.

In testimony whereof, I have caused these letters to
L. S. be made patent, and the seal of the United States to be hereunto affixed.

Given under my hand, at the City of Washington, this twelfth day of May, in the year of our Lord one thousand eight hundred and twelve, and of the Independence of the United States of America the thirty-sixth.

JAMES MADISON,

By the President,

JAMES MONROE,

Secretary of State.

City of Washington, To wit:

I do hereby certify, that the foregoing Letters Patent, were delivered to me on the twelfth day of May, in the year of our Lord one thousand eight hundred and twelve, to be examined: That I have examined the same, and find them conformable to law; and I do hereby return the same to the Secretary of State, within fif-

teen days from the date aforesaid, to wit, on this twelfth day of May, in the year aforesaid. WILLIAM PINKNEY,

Attorney General of the United States.

The Schedule referred to in these Letters Patent, and making part of the same, containing a description in the words of the said Daniel Dod himself, of his mode of applying the steam engine to boats, mills, &c.

Specification.—I employ two lever beams of equal or unequal length as I find most convenient. Each lever beam is hung on a pivot, in such a way as to admit of a free vibratory motion. The pivot of the one lever beam is placed higher than the pivot of the other lever beam, a distance of from one twenty-fourth part to one twelfth part of the sum of the length of both lever beams.

These lever beams are so hung, that they will both move in the same vertical plane, and the inner end of the upper lever beam must be directly over the inner end of the lower lever beam.

The inner ends of these two lever beams must be connected together by means of a strong iron link, made in the following manner, viz:

A strong flat iron bar has a hole made through each end. The distance between these holes must be equal to the distance which the pivot of the upper lever beam is higher than the pivot of the lower lever beam. There must also be an intermediate hole through this flat bar, exactly in a right line with the two end holes. This intermediate hole must be made in such a point as to divide the space between the two end holes, in proportion to the inner arms of the lever beams. There must be two such bars precisely alike, which must be connected together, (at a distance from each other, equal to the thickness of the lever beam,) by putting a strong bolt through the holes at one end of the bars, and another bolt through the intermediate holes; these bars, thus connected, are called the link of the parallel lever.

On each side of the inner arm of the lower lever beam, must be fastened a strong iron bar, which must project a little distance beyond the end of the lever beam. The bolt in the end of the link of the parallel lever must be firmly fastened to the end of the upper lever beams, and the other end of the side pieces of the link must be connected to the end of the flat iron bars which project out at the end of the lower lever beam.

When the two inner ends of the lever beams are thus connected together, the connecting link must stand nearly in a perpendicular

position, and the length of the link from the intermediate hole to the upper hole, must bear the same proportion to the length from the same intermediate hole to the lower hole, that the inner arm of the lower lever beam bears to the inner arm of the upper lever beam. The top of the piston rod must be connected to the bolt in the intermediate hole in the link, and the cylinder must be placed perpendicularly under the same. Thus the two lever beams are made to move in concert, and by the usual contrivance of pitmans and cranks, (or sun and planet wheels,) at the outer ends of the lever beams, double sets of mill works or machinery of any kind may be put in motion.

My mode of applying this invention to the navigation of a boat, is as follows :—

I place two propelling wheels as near the bow of the boat as convenience will admit.

The arbors of these two wheels are placed in the same right line, and the inner ends of the arbors approach near together in the middle of the boat. One crank attached to the end of both arbors, and one pitman from the end of the lever beam, put both wheels in motion.

Then two other propelling wheels are placed so far abaft of the forward wheels, that the distance shall be equal to the sum of the length of the two lever beams. The arbors of these two abaft wheels, also are placed in a right line with each other, and the inner ends of the arbors approach near together, and a crank is connected with the ends of both arbors, similar to the forward wheels.

Then a pitman from the end of the other lever beam will drive both wheels together.

In this way, without a cog-wheel or toothed sector of any kind, I employ one steam engine in a boat to drive four propelling wheels, by which means I am enabled to avail myself of a large proportion of propellers, without making my wheels so wide as to project out an inconvenient distance beyond the sides of the boat.

The foregoing method of driving double sets of machinery with one steam engine, and the contrivance of applying four propelling wheels to a boat, I claim as my invention and exclusive right.

DANIEL DOD.

(Witnesses,)
AARON OGDEN,
GEORGE BARBER.

Auburn

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